1993

FINAL ENVIRONMENTAL ASSESSMENT FOR ENDANGERED SPECIES HABITAT IMPROVEMENT/CREATION ALONG THE MISSOURI RIVER MAIN STEM SYSTEM

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FALL 1993

US Army Corps of Engineers
Omaha District

FINDING OF NO SIGNIFICANT IMPACT
ENDANGERED SPECIES HABITAT ENHANCEMENT
ON THE MISSOURI RIVER

An environmental assessment has been prepared for several methods of habitat enhancement and creation along the Missouri River Main Stem System. Most of the actions described were suggested in the November 1990, U.S. Fish and Wildlife Service Biological Opinion on the operation of the Missouri River Main Stem System and will provide safer nesting habitat for interior least terns and piping plovers.

Adverse impacts of these actions are all temporary and localized, consisting of temporary, localized smoke, and possible ash suspension in nearby waters due to burning of vegetation and presence of temporary noise disturbance during helicopter application of herbicide and bulldozing activities. Addition of up to 60 cubic yards of gravel to allow safer transport of bulldozers from shore to a sandbar complex will have no adverse effects. Potential archeological sites (steamboat wrecks) near areas slated for bulldozer operations will be surveyed with a metal detector (one site), and written guidance will be given to construction personnel prior to the activities. If potential wrecks are found, no work will take place on that site until surveyed and cleared by an archeologist. No long-term adverse impacts on the areas described are anticipated. These actions will not adversely impact any threatened or endangered species.

Factors that were considered in making this decision included but were not necessarily limited to conservation, economics, esthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, air and water quality, energy needs, safety, food production, and in general the needs and welfare of the people.

It is my finding that the Federal actions would not have significant adverse impacts on the quality of the human environment; and therefore, an environmental impact statement will not be prepared.

November 23, 1993
Date

Michael S. Meuleners
Colonel, Corps of Engineers
District Engineer

FINAL
ENVIRONMENTAL ASSESSMENT
FOR ENDANGERED SPECIES HABITAT IMPROVEMENT/CREATION
ALONG THE MISSOURI RIVER MAIN STEM SYSTEM

FALL 1993 ACTIVITIES

INTRODUCTION

The interior least tern (Sterna antillarum) and the piping plover (Charadrius melodus) are federally endangered and threatened species, respectively, which nest on sandbars in the Missouri River and along reservoir shorelines. The riverine and recently-exposed reservoir shoreline nesting habitat has been decreasing in past years, at least in part due to vegetative encroachment. Vegetation is no longer regularly scoured from river sandbars by heavy spring flows and/or ice, primarily because flows are regulated by the main stem dams. Channel degradation may also contribute to increased vegetation by allowing more historically flooded areas to dry out and allow seedling development. New sandbar creation is uncommon because the river carries less sediment and is no longer meandering along much of its course. Bank erosion still continues to supply sediment along "natural" segments of the Missouri River; however, the reservoirs collect much of the incoming sediment, so little passes on to the river downstream from the dams. Along some of the reservoirs on the Missouri River, drought conditions have resulted in lower water elevations and exposed shoreline suitable for nesting over the past five years. Now these areas, too, are becoming vegetated due to lack of inundation. The combination of vegetation encroachment and reduced island formation result in less suitable nesting habitat for these two bird species.

BACKGROUND

The Missouri River, in its natural state, was a meandering, dynamic river that continually eroded and deposited, creating and destroying islands and sandbars. Sandbars and islands would be scoured of vegetation by heavy spring runoffs and winter ice flows. Channelization was initiated in the early 1900's with the Missouri River Bank Stabilization and Navigation Project, a 6-foot deep channel from Kansas City downstream to the mouth. Authorization for additional channelization upstream followed, as well as construction of six main stem dams. The last dam to close was Big Bend in 1963.

In 1985, the interior least tern (tern) was listed as an endangered species and the piping plover (plover) was listed as a threatened species in the Great Plains. The Missouri River Division (MRD) of the Corps initiated informal consultation soon after the birds were listed based on the effects of Missouri River system regulations on the species and their habitat. During the 1986 breeding season, MRD, the U.S. Fish and Wildlife

(Service), and South Dakota Game, Fish, and Parks began gathering population and habitat data for the two species. In March 1986, the Service requested that the Corps enter into formal Section 7 consultation; the Corps responded by requesting formal consultation in April. Also in 1986, the MRD Reservoir Control Center (RCC) began constraining system releases and implementing and evaluating techniques to protect the birds. By the fall of 1987, sufficient data had been gathered to allow MRD to prepare a Biological Assessment, which was submitted to the Service in October. The Biological Assessment concluded that the operations of the main stem system would not effect the bald eagle or the peregrine falcon, and that terns and plovers may be affected. That assessment was supplemented by additional data which was sent to the Service in January 1989. Based on the Biological Assessment and the supplemental data, the Service issued a Biological Opinion (Opinion) in November 1990.

The Opinion stated that operations would not likely jeopardize the northern states population of the bald eagle. Conservation recommendations were made to the Corps for the bald eagle. The Opinion also concluded that the operation of the main stem system would jeopardize the continued existence of the interior least tern and piping plover. The Opinion describes Reasonable and Prudent Alternatives, Conservation, Recommendations, and Reasonable and Prudent Measures for implementation in order to remove or alleviate the jeopardy opinion rendered by the Service. The Fiscal Year (FY) 1992 Implementation Plan describing all proposed activities for terns and plovers prior to 1 October 1992, was sent to the Service.

The Omaha District's Fiscal Year 1993-Fiscal Year 1995 Plan for Habitat Improvement for the Interior Least Tern and Piping Plover was finalized in May 1993. This plan is "Phase 1" of an incremental approach to a long-term plan (10 years), in which activities suggested in the Opinion will be implemented and monitored for success for several years, then the "best" methods from those years will continue on into the next phase of the plan. The ultimate goal of these actions is to increase fledge ratios and adult populations for interior least terns and piping plovers.

The MRD is presently reviewing its current Master Manual for operations for the Missouri River Main Stem System. The Opinion issued by the Service and this environmental assessment (EA) which addresses the implementation of the recommendations contained in that Opinion are based on the current Master Manual. Should the Division's review result in changes to the Master Manual, then the reinitiation of consultation will be considered. In the meantime, the Corps will continue to implement the recommendations of the Opinion in order to avoid jeopardizing the continued existence of the two birds under current operations.

PROPOSED FEDERAL ACTIONS

Maintenance of existing habitat (already available for nesting)

In the absence of the natural dynamic forces present in untamed rivers, the island habitat that resulted from prior habitat creation or improvements may not be available next season without maintenance to slow or remove vegetative growth, ease erosion of islands, minimize damp low areas, remove large drift that could serve as predator habitat, etc. Maintenance of habitat already created or improved along the Missouri River Basin will be undertaken on an "as needed" basis. A detailed description of maintenance activities will not be included in this EA, however, Lake Offices will coordinate with appropriate personnel in each state (primarily landowners or agencies responsible for the lands involved) about the location and type of maintenance activities needed. It is anticipated that after 2 or 3 years of improvements and maintenance, especially with regard to vegetation control, the seed base will be sufficiently reduced to allow for maintenance activities on a cyclic, every 2 or 3 year basis. An accounting of maintenance activities will be included each year in the end-of-year report of tern and plover activities. A list of previously modified habitat locations can be found in Appendix A. Maintenance activities may include:

1. Use of glyphosate-based aquatic herbicide (such as RODEO) on leafed-out vegetation by helicopter (South Dakota/Nebraska only), ATV with boom, or backpack spray application methods

2. Burning of dead vegetation (after use of herbicide)

3. Armoring of existing islands with sand or SEA bags

4. Set up and removal of sand fences on existing habitat areas; placement of oyster shell on created dunes

5. Removal of large driftwood and other non-living potential predator perch sites

6. Minor sand dune re-shaping using hand tools or a small Bobcat or equivalent

7. Mowing of vegetation with a sickle mower

8. Hand cutting of woody saplings (<4 inches, dbh)

All actions will be undertaken after terns and plovers have left the area, or on islands not inhabited by terns and plovers.

The environmental effects of the above maintenance actions have been addressed for sites listed in Appendix A in previous EA's (Corps of Engineers 1992a; Corps of Engineers, 1992b).

Creation, improvement, and reclamation of habitat (previously unavailable for nesting)

In addition to the maintenance activities mentioned above, some areas will be creating new habitat, improving existing habitat that has not been previously modified, or reclaiming habitat that once was available but now is not usable (primarily due to vegetative encroachment). "New" work will be included in an EA, and comes in two varieties:

1. **Use of old methods on new areas**. For example, the "maintenance" activities described above would be considered "new" work if these actions were done in an area that had not been previously modified. All areas of previous modifications have been included in EA's in the past and are listed in Appendix A.

2. **Use of new methods or larger actions in any area (old or new)**. "New" methods would involve techniques from literature or other sources not previously used by the Corps for tern and plover habitat creation (e.g. floating islands in spring EA). "Larger" actions would include bulldozer operations, dredging operations, etc.
The following new work is planned for the fall of 1993 (through November):

Missouri River below Garrison Dam. This area is required to create or reclaim at least five acres of new habitat during 1993 (Corps of Engineers, 1993). The following islands are slated for habitat improvement this fall:

1. Islands located at River Miles (RM) 1351.3 and 1368.0 are targeted for dune creation using a series of sand fences. Crushed oyster shell will then be placed on the new dunes to prevent wind erosion.

2. Islands located at RMs 1371.1 and 1373.5 are targeted for vegetation removal using a glyphosate-based aquatic herbicide. Herbicide will be applied by a certified applicator using a quadrunner with a boom spray. Transportation to the islands will be by government boat. Acreages cleared will be approximately 2.8 acres (island located at RM 1373.5) and 6.4 acres (island located at RM 1371.1).

Waterfowl and shorebirds are the primary users of these islands, including least terns, piping plovers, killdeer, sandpipers, gulls, swallows, common terns, pelicans, blue herons, Canada geese, and mallards. Seasonal observations of bald eagles have been made near the island located at RM 1371.1, and have nested in the vicinity. Mammals have not been observed on any of the islands, but deer tracks were seen on the island located at RM 1371.1. Amphibians and reptiles have not been observed on the islands, but may still be present.

Lake Oahe. The following work is planned for the extreme upper end of Lake Oahe, North Dakota. Areas are listed in the order that they will be completed. As many areas as time, funding, and weather will allow will be improved this fall:

1. **Islands located at RM 1285.3 to 1286.0.** These three islands are approximately 3 to 5 acres in size near the east shore of the Missouri River in the MacLean Bottoms area. SE 1/4 Sec. 5, T 136 N, R 79 W.

2. **Island located at RM 1296.7.** One small island approximately 1.5 acres in size near the east shore of the Missouri River in the Kimball Bottoms area. NW 1/4 Sec. 25, T 137 N, R 80 W.

3. **Island located at RM 1269.3.** A pipeline dredge island near the mouth of the Cannonball River. SW 1/4 Sec. 11 and SE 1/4 Sec. 10, T 134 N, R 79 W.

4. **Islands located at RM 1249.0.** Porcupine Island. S 1/2 Sec. 13, T 131 N, R 80 W.

5. **Islands located at RM 1302.5.** Little Heart Island. SW 1/4 Sec. 9, T 137 N, R 80 W.

Habitat improvement work will consist of treatment of the areas with RODEO herbicide, hand-cutting of saplings (3 to 4 inches dbh), and burning and oyster shell placement (sites 1 and 2). Potentially 17 acres of habitat (elevation 1612 msl.) will be created.

Existing vegetation consists of white and yellow sweet clover, cottonwood and sandbar willow saplings, and grasses. All of the sites listed above are used as nesting habitat by spotted sandpipers, killdeer, and Canada geese. In addition, site 3 had piping plover nesting (prior to 1993), and site 4 had least tern nesting on low (now inundated) areas during 1993.

Missouri River below Fort Randall Dam. A sandbar complex near RM 875, South Dakota side of the river, will be pushed up to higher elevations using bulldozers. During low flows, there is about 40 acres of exposed sand substrate. This substrate will be pushed up into mounds that extend at least 1.5 feet above anticipated water levels during 1994 summer peak flows. Target elevations will be established later in the year, once the RCC has a better idea on summer flows. This operation is planned for late November or December. Bulldozers will gain access to the sandbar complex from the South Dakota shore. Coordination with landowners for permission for access is underway. There is a small area of silty substrate in the crossing area that will need gravel reinforcement to prevent the bulldozers from becoming mired. Reinforcement will consist of 4 to 5 (up to 60 cubic yards) of gravel dumped along the shoreline and in the adjacent water. Gravel will be from a local gravel pit and will most likely become pushed down into the silt by the weight of the bulldozers. The result will be a "bottom" to the silty area, which will prevent the bulldozers from becoming stuck as they cross onto the sandbar. This will require a 404 permit for compliance with the Clean Water Act. The permitting process has been initiated by the Lake Office and will be concluded prior to the operation. A copy of the 404 permit application is in Appendix D.

Vegetation on the low sand complex consists of pioneer species such as sweet clover and small willow and cottonwood saplings. Since this area is generally under water much of the time, permanent animal residents are unlikely. However, terns and plovers have historically tried to nest in this area. There is a bald eagle nest across the river on the Nebraska side in a heavily wooded area. Eagle use is seasonal.

Missouri River below Gavins Point Dam. This area is required to create or reclaim at least 15 acres of new habitat during 1993 (Corps of Engineers, 1993).

Several island areas will be pushed up to higher elevations using bulldozers. Transportation of heavy equipment to the islands for the week-long operation will be obtained by the South Dakota Army National Guard. Tentative dates for the operation are October 25-29 (first choice) or November 1-5 (alternate week). The following sites are all eligible for bulldozer work if access can be gained by the National Guard: Islands located at RMs 804.5, 802.7, 801.2, 799.2, 793.9, 790, 781.1, 778, 773, 770.5, 768, 765.9, and 764. As many sites as feasible and as time allows will be completed. Target elevations will be at least 1.5 feet above water surface elevations during anticipated peak summer flows for 1994. Specific elevations will be established prior to the operation, allowing RCC more time to develop anticipated flows for next year.

In addition to increasing island elevations, vegetation on existing high islands will be removed using RODEO herbicide, mowing, and cutting of saplings. This is similar to maintenance activities but is being done on islands not modified in the past. The islands

containing areas that are targeted for vegetation removal are located at: RMs 796.6, 796, 793.8, 781, 780, 778.5, 778, 777.8, 773, 771, 770.5, 769.8, 769.5, 765.7, 764, 761.4, 758. High, vegetated areas on these islands will have vegetation removed in order to provide higher nesting habitat for terns and plovers. As many islands as possible will be done prior to frost. Once plant functions slow for the winter, the herbicide no longer translocates through to the roots, so plant control cannot be obtained in this manner.

Island vegetation consists primarily of yellow and white sweet clover, willow and cottonwood saplings, and sedges. The islands have no known animal residents, however they are occasionally used by raccoons, mink, white-tailed deer, migrating waterfowl, as well as nesting habitat for terns and plovers.

ENVIRONMENTAL EFFECTS OF PROPOSED ACTIONS

The following were considered during the environmental analysis process: air/water quality, biological resources, cultural resources, socioeconomic resources, land use/ownership, and recreational use.

Cultural resources

Sandbar areas are continually changing due to the erosive nature of the river currents and wave action. Most of the islands are recently accreted and therefore would have little or no archeological significance. Spraying herbicides, burning, and oyster shell placement are non-intrusive and would not alter the shape of the islands, or disturb the soils of the surrounding area. However, bulldozing low areas to higher elevations is an invasive action that changes the shape of the island. Cultural resources personnel have been notified of the proposed actions, and have indicated that there are archeological artifacts (steamboat wrecks) at several locations in the Missouri River. The historical record for steamboat wrecks loosely links these locations to bends in the river (many of which no longer exist) and tributaries (which still exist). Therefore, the exact locations are not known, and it is likely that any wrecks would be so deeply buried in silt and sand that it would be highly unlikely that surface bulldozing (at maximum depths of 2 feet) would unearth any portion of a wreck. However, the remote possibility exists that some portion of a wreck could be scraped with bulldozing efforts, especially on sandbars near Yankton (two wrecks reported), near the mouth of the James River (one wreck), and near the mouth of the Vermillion River (two wrecks). If any wooden or metal fragment is unearthed in the process of bulldozing nesting islands, construction will stop, pending a determination of the most plausible origin of the fragment. A briefing has been written by Corps archeological staff (Appendix E) describing the type of debris that would be unearthed if a steamboat was located, and the protocol for such a discovery. This

directive was coordinated with the State Historical Preservation Officers (SHPO) in Nebraska and South Dakota.

In addition to the steamboat wrecks listed above, a partially exposed wreck of some type of vessel (origin unknown) was reportedly viewed by an informant near RM 875 during low water and reported to the National Park Service office in O'Neill, Nebraska. No other records of this wreck are available in the standard records, such as Chittenden, or the records of the South Dakota Historical Society. Since there has been an actual siting, several precautionary measures will be taken prior to construction. The area will be surveyed with a metal detector to determine the location of the potential wreck. If no metal is detected in the construction area, then construction will continue as planned. If metal is detected (regardless of the source), an archeologist will be on-site during the construction activities. All actions will be coordinated with the SHPO.

The community of Raising Hil is located near RM 875 also. This community was a type of commune that was a social experiment organized during the 1930's. The members were Native American, and the community was built by the Bureau of Indian Affairs. Corps archeological staff have determined that construction on the sandbar near RM 875 will not affect this former community.

Socioeconomic resources

The direct and indirect effects of the proposed activities on employment and community income are negligible due to the small scale and limited duration of the activities. Most of the work will be done by Corps personnel, although some herbicide work will be contracted out, as well as the transportation of heavy equipment to the islands below Gavins Point Dam. Land values will not be affected, nor will community growth, farmland, tax revenues, or public services and facilities. Temporary elevations in noise levels may be experienced during helicopter application of RODEO herbicide (downstream from Gavins Point Dam) and during the bulldozer operation.

Land use/ownership

Lands slated for habitat improvement are not developed, farmed, or grazed, and have no permanent buildings. The lands are sandbar islands in the Missouri River and within the flood plain. All islands could potentially be underwater during high river inflows upstream and/or high level discharges from upstream reservoirs.

For habitat work taking place in Nebraska, rights-of-entry gained during 1992 will still be valid.

Recreation

Recreational use of specific sandbar islands in the area is sporadic. During the fall and winter months, river islands are used for waterfowl hunting. Hunting activities should not be adversely affected by the proposed activities, as these actions occur at a different time of year. It will be pheasant hunting season during the bulldozer operation; however, there is no pheasant habitat on the islands in question, so this will not affect the project. Construction of new permanent duck or goose blinds on islands slated for activity can be limited. During the summer months, river islands are used for picnicking, sand volleyball, sandbar golf, fishing, campfires, etc. Island areas used for tern and plover nesting are off-limits for recreational uses. This use restriction is permitted by both the Endangered Species Act and by the National Wild and Scenic Rivers Act [Public Law 90-542 (October 2, 1968)]. Even within recreational rivers, public use can be regulated and distributed where necessary to protect and enhance the resource values of the river area.

Air/water quality

Use of RODEO herbicide will not affect air or water quality in the area, as was determined in earlier EA's (Corps of Engineers 1992b). The herbicide mixture may need to be refilled in backpack sprayers on-site, for larger locations. If this occurs, refilling will occur away from watered areas, and dilution will be done immediately using water transported from the Lake Office. Drift from helicopter application onto non-target areas will be minimal due to use of a microfoil boom and drift retardants, similar to what is done for APHIS test strips when testing various herbicides.

Burning of dead vegetation will temporarily increase suspended particles in the air in the form of smoke. Prevailing winds will dissipate the smoke within hours. Small amounts of wind-driven ash residue from the dead plants may be temporarily suspended in the water immediately downwind from the island area that was burned. This will be dissipated by a combination of river current and wind.

Exhaust from bulldozers and National Guard boats may minimally and temporarily increase the amount of suspended particles in the immediate vicinity of the bulldozing project downstream from Gavins Point Dam.

Regulatory requirements

Herbicide application will be done by licensed and certified pesticide applicators.

Bulldozing operations will not deposit sand into wetland areas, rather sand will be piled higher onto existing dunes or other high areas. Therefore, as in 1992 bulldozing activities (Corps of Engineers 1992b), a Section 404 permit is not required.

A Section 404 permit is required for placement of up to 60 cubic yards of gravel along the shoreline and into the river to cover a silty substrate downstream from Fort Randall Dam. The gravel will prevent heavy equipment from becoming mired in the silty substrate while crossing over to the sandbar area. A public notice on this action will be circulated to appropriate agencies. A copy of the Section 404 permit application is in Appendix D.

Biological effects

Mowing, burning, and herbicide use result in loss of vegetative cover on sandbar islands and shoreline areas. This will result in a reduced amount of cover for mammals, reptiles, and birds. This will also result in a reduction of foraging material for transient herbivores and insects. In both cases, the reduction is nominal compared to the total amount of cover and forage available for these animals and insects in the general vicinity of habitat work.

Bulldozing activities will modify island topography to allow for higher nesting areas for terns and plovers. Island areas slated for this method are typically low in elevation, unvegetated (or sparsely vegetated with small pioneer plants), are inundated during peak summer flows, and have little potential for permanent animal residents.

The seasonal presence of bald eagle nests in the vicinity of herbicide work in North Dakota, and bulldozer work below Fort Randall Dam will not interfere with nesting activities. Conducting habitat work during the fall will avoid the nesting season.

Although there are state threatened reptiles, such as the spiny softshell turtle (Apalone spinifera), the false map turtle (Graptemys pseudogeographica), and the eastern hognose snake (Heterodon platirhinos) that utilize sandy dunes and shorelines for habitat in South Dakota, none of these rare reptiles have ever been sighted on tern and plover nesting islands. Field personnel have been given photos of the above species, and none were sighted during the 1993 weekly monitoring activities on the islands. Care will be taken

during habitat work to avoid these reptiles and their eggs, if they are seen. Any sighting of these rare reptiles will be reported to the Natural Heritage Foundation in South Dakota.

The desired biological effects of all actions is increased courtship, breeding, nesting, and chick rearing of terns and plovers on areas slated for habitat improvement.

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers System includes sections of the Missouri River from Fort Randall Dam downstream to the headwaters of Lewis and Clark Lake, and from Gavins Point Dam downstream to Ponca State Park, Nebraska. The 58-mile Gavins Point Dam to Ponca stretch was designated as the Missouri National Recreational River (MNRR) in 1978 [Public Law 95-625 (Nov. 10, 1978)]. The 39-mile stretch from Fort Randall Dam to the headwaters of Lewis and Clark Lake, designated in 1991, is known as the 1991 Missouri Recreational River (91MoRR) [Public Law 102-50 (May 24, 1991)]. All habitat improvement activities in these two river reaches are within the boundaries of the recreational river.

The MNRR and 91MoRR were designated under the Wild and Scenic Rivers Act and thereby added to the National Wild and Scenic Rivers System (NWSRS). The purpose of designating a river under the Wild and Scenic Rivers Act is to protect its free-flowing characteristics and its significant scenic, recreational, fish, wildlife, geologic, historic, and cultural values. Some of these values have already been discussed. The impact of habitat maintenance and bulldozing activities to the remaining values is summarized below:

1. **Free-flowing character.** Habitat maintenance activities (described earlier) will not affect the free-flowing nature of the river. Use of sand bags or SEA bags for island stabilization will, however, reduce natural erosion of the sandbar islands into the river. Sand bags and SEA bags will only be used for these purposes; not for entrainment of the channel.

Bulldozing activities will not add or subtract any material from the riverbed, only reshape the substrate into higher mounds for safer high-water nesting.

Addition of up to 60 cubic yards of gravel will not alter the free-flowing character of the river, as this gravel will be distributed evenly across a silty area, not piled into a dike. Heavy machinery will then drive across the gravel, pushing it down into the silt.

2. **Scenery**. Habitat maintenance may alter the scenery from vegetation-covered sandbars to sparsely-vegetated sandbars. Under "natural" conditions, sandbars would be in various stages of succession, including sparsely-vegetated. If SEA bags or sand bags are used for sandbar stabilization, they will also alter the scenery of the area. The bags are sand or buff colored and are not distracting to the eye. Additional sand has blown around bags placed last fall, and eventually the bags may become partially buried by new sand.

Bulldozing activities will alter the scenic view during the actual construction week. After construction is complete, the shaped mounds will weather similar to naturally contoured islands.

Addition of up to 60 cubic yards of gravel will not alter the scenery of the area, as the gravel will be pushed into the silt after the first heavy vehicle moves across it.

3. **Geologic**. Habitat maintenance will not alter the geologic components of the NWSRS.

Bulldozing activities will not alter the geologic components of the river either.

Addition of up to 60 cubic yards of gravel will not alter the geologic components of the area, as gravel is a local resource and will be acquired locally.

4. **Historic**. Habitat maintenance will not alter the historic components of the NWSRS. In fact, the purpose of habitat maintenance to restore historic nesting areas for terns and plovers, preserving the natural heritage of the area.

Bulldozing activities also will not alter the historic components of the river.

Addition of up to 60 cubic yards of gravel will not alter the historic components of the river, as there are no historic sites in the vicinity of the gravel.

5. **Cultural**. Habitat maintenance will not alter the cultural components of the NWSRS. Maintenance activities involve islands that have already been addressed in previous EA's, and Corps' cultural resources staff have already reviewed those areas. All new areas where habitat work is done is coordinated with the cultural resources staff.

Bulldozing activities will only be done in areas cleared for this activity by Corps cultural resources staff. Therefore, bulldozing activities will not alter the cultural components of the NWSWS. (See "Cultural Resources" section).

Addition of up to 60 cubic yards of gravel will not alter the cultural components of the river, as there are no cultural sites in the vicinity of the gravel input.

ALTERNATIVES CONSIDERED

The various methods used within the different reaches are all alternative methods of habitat enhancement. Habitat improvement of nesting areas for interior least terns and piping plovers is still in experimental stages, and the "best" method or combination of methods is still not known, and could differ along the different reaches of the Missouri River. Alternatives to the actions chosen for each reach are described below. For all reaches, the "no action" alternative could result in continued loss of nesting habitat due to vegetative encroachment and/or continued loss of eggs and nests due to flooding.

Alternatives to chemical vegetative control:

1. Mechanical clearing (disking, mowing, bulldozing)
2. Hand clearing
3. Burning
4. Flow manipulations

Mechanical clearing is more disruptive and less effective than chemical clearing. Mechanical clearing will still be utilized as a method of vegetation control but primarily during the springtime when dead vegetation (killed with chemicals the previous fall) that had not weathered or scoured off the islands over the winter will be knocked down or mowed. Mechanical clearing of live vegetation doesn't kill the root system and in some cases actually stimulates additional regrowth.

Hand clearing is a viable method for clearing newly established vegetation in small areas, however it is labor-intensive and time consuming. Chemical removal of dense vegetation over large areas is preferable to hand clearing, since it is faster and less labor-intensive.

Burning of live, dormant vegetation may have potential for use in some areas, however an intense, persistent flame is necessary. Burning does not kill the root system as chemical removal does, so re-growth is still a problem. Burning will be used in removing dead vegetation killed with chemicals the previous fall and for scorching the ground, in an attempt to control annual growth from seed.

Flow manipulation has been suggested for scouring vegetation. The RCC has manipulated flows in the past when there were opportunities for flow fluctuations without hampering flood control and navigational responsibilities.

Alternatives to bulldozing islands to higher elevations:

1. Dredging
2. Floating islands

Dredging new islands is a technique used during 1992, that proved very successful (23 birds fledged; fledge ratio 2.01). This technique will most likely be used again, however, dredging is quite expensive and requires more planning and lead time than bulldozing does.

Floating islands were installed in two areas prior to the 1993 breeding season. The islands did not host nesting birds this year, so further expansion of this program at this time would be premature.

Alternatives to addition of gravel for transport across silt: (island located at RM 875)

1. National Guard bridge unit

The National Guard bridge unit, although used elsewhere, would not be able to place a bridge section over the silty area due to the exposed nature of the connection between land and island. The National Guard would need about two feet of water to shuttle equipment back and forth to the island (three feet if all equipment is shuttled at once). If we increase flows to allow for transport, then less sand is exposed for pushing into elevated areas. The expense of the National Guard would far exceed the expense for gravel, and their availability for a second operation this fall is questionable (they are already doing an operation for us below Gavins Point Dam where we have no other means for transport to the islands).

COORDINATION WITH OTHER AGENCIES

A copy of the draft EA was sent to appropriate state and Federal agencies for review, and to the newly formed Tern and Plover Management Team members. A copy of the EA distribution list can be found in Appendix C. Written comments from the draft EA can be found in Appendix F.

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Date 11/18/93

Reviewed by: Richard D. Gorton

Richard D. Gorton
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Date 11/18/93

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Corps of Engineers, 1992b. Final Environmental Assessment for Endangered Species Habitat Improvement/Creation Along the Missouri River Main Stem System; Fall Activities. Corps of Engineers, Omaha District, Omaha, NE.

Corps of Engineers, 1993. (Draft) Omaha District's FY 93 - FY 95 Plan for Habitat Improvement for the Interior Least Tern and Piping Plover; May 1993. Corps of Engineers, Omaha District, Omaha, NE.

LIST OF AGENCIES, OFFICES, AND INDIVIDUALS SOLICITED FOR COMMENT

U.S. Fish and Wildlife Service, Nebraska

U.S. Fish and Wildlife Service, South Dakota

U.S. Fish and Wildlife Service, North Dakota

U.S. Fish and Wildlife Service, Montana

National Park Service, O'Neill, NE

National Park Service, Omaha, NE

Montana Department of Fish, Wildlife, and Parks

Missouri Department of Conservation

Nebraska Game and Parks Commission

North Dakota Department of Game and Fish

South Dakota Department of Game, Fish, and Parks

U.S. Environmental Protection Agency, Region 7, Kansas City

U.S. Environmental Protection Agency, Region 8, Denver

APPENDIX A

MAINTENANCE HABITAT

HABITAT "MAINTENANCE" AREAS
(Areas previously targeted for habitat work)

AREA

Fort Peck Lake

Sec. 20 and 21, T26N, R41E, Valley Co., Montana

Missouri River below Fort Peck Dam

RM 1699.2
RM 1698.5 (floating island locations)
RM 1691.2

Lake Sakakawea
Deepwater Entrance Island
Van Hook Rec Area, island 1
Van Hook Rec Area, island 2
Hoffland Bay island

Missouri River below Garrison Dam
RM 1380
RM 1370
RM 1369
RM 1361
RM 1353
RM 1352
RM 1351
RM 1348
RM 1329.5
RM 1328
RM 1309

Lake Oahe

Sec. 32, T124N, R79W, Walworth Co., South Dakota
Sec. 1, T128N, R80W, Campbell Co., South Dakota
Sec. 6, T128N, R79W, Campbell Co., South Dakota
Sec. 1, 2, 6, 7, 11, 12, 13, 18, T123N, R78W,
Walworth Co., South Dakota
Sec. 2, T123N, R79W, Walworth Co., South Dakota

Missouri River below Fort Randall Dam

RM 869
RM 866.7
RM 853.8
RM 843
RM 838
RM 836.9
RM 833.8 (dredge island)
RM 833.2
RM 833.0 (dredge island)
RM 832.9
RM 832.8 (dredge island)
RM 832

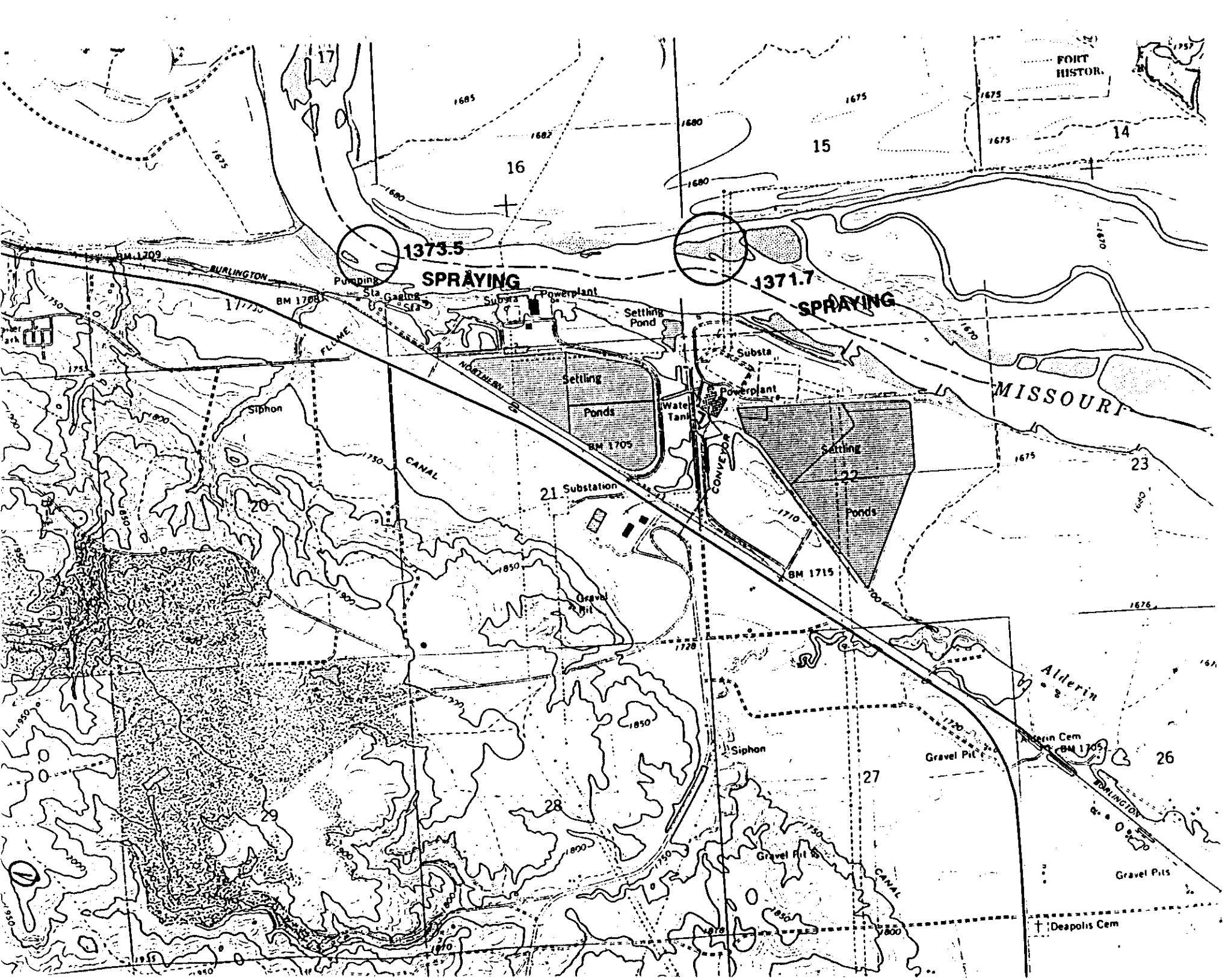
Lewis and Clark Lake
RM 830 (floating island)

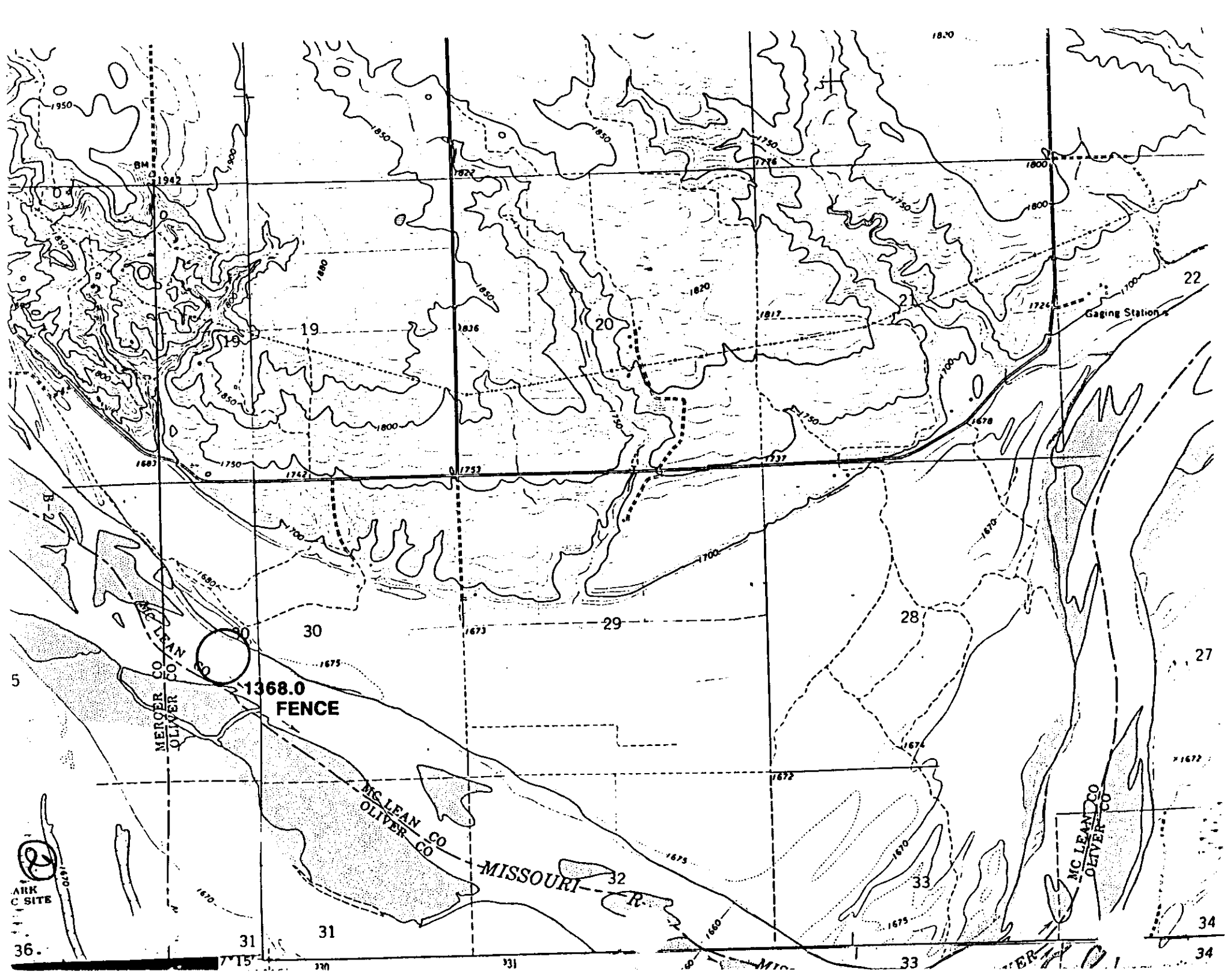
Missouri River below Gavins Point Dam

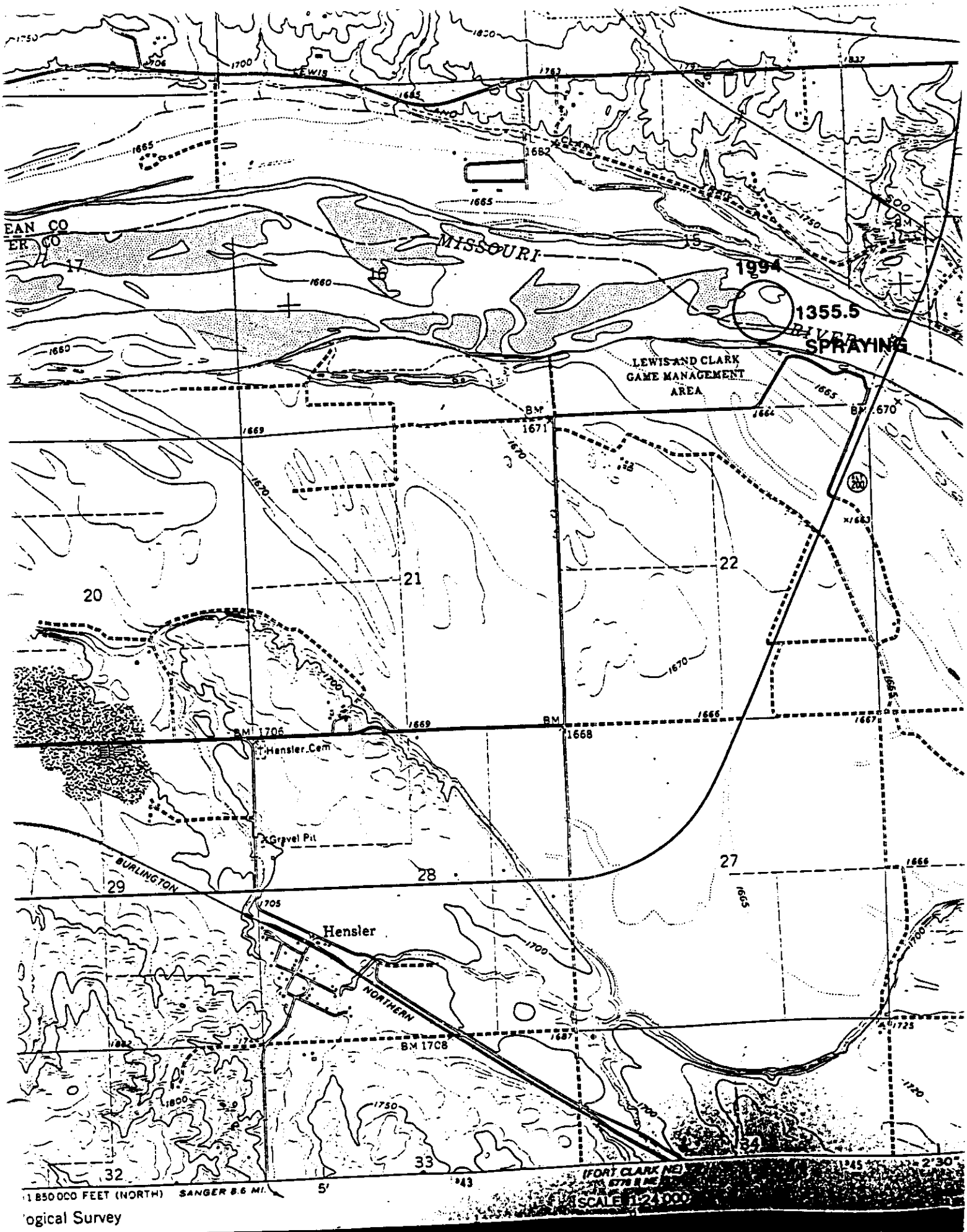
RM 804.5
RM 804
RM 803.8
RM 803.7
RM 801
RM 799.1
RM 798.5
RM 797
RM 790.6
RM 790.5
RM 790.4
RM 781.6
RM 781.4
RM 781.3
RM 775.9
RM 775.0
RM 772.5
RM 770.1
RM 770.0
RM 761.7
RM 759.2
RM 759.0
RM 757.4
RM 757.3

APPENDIX B

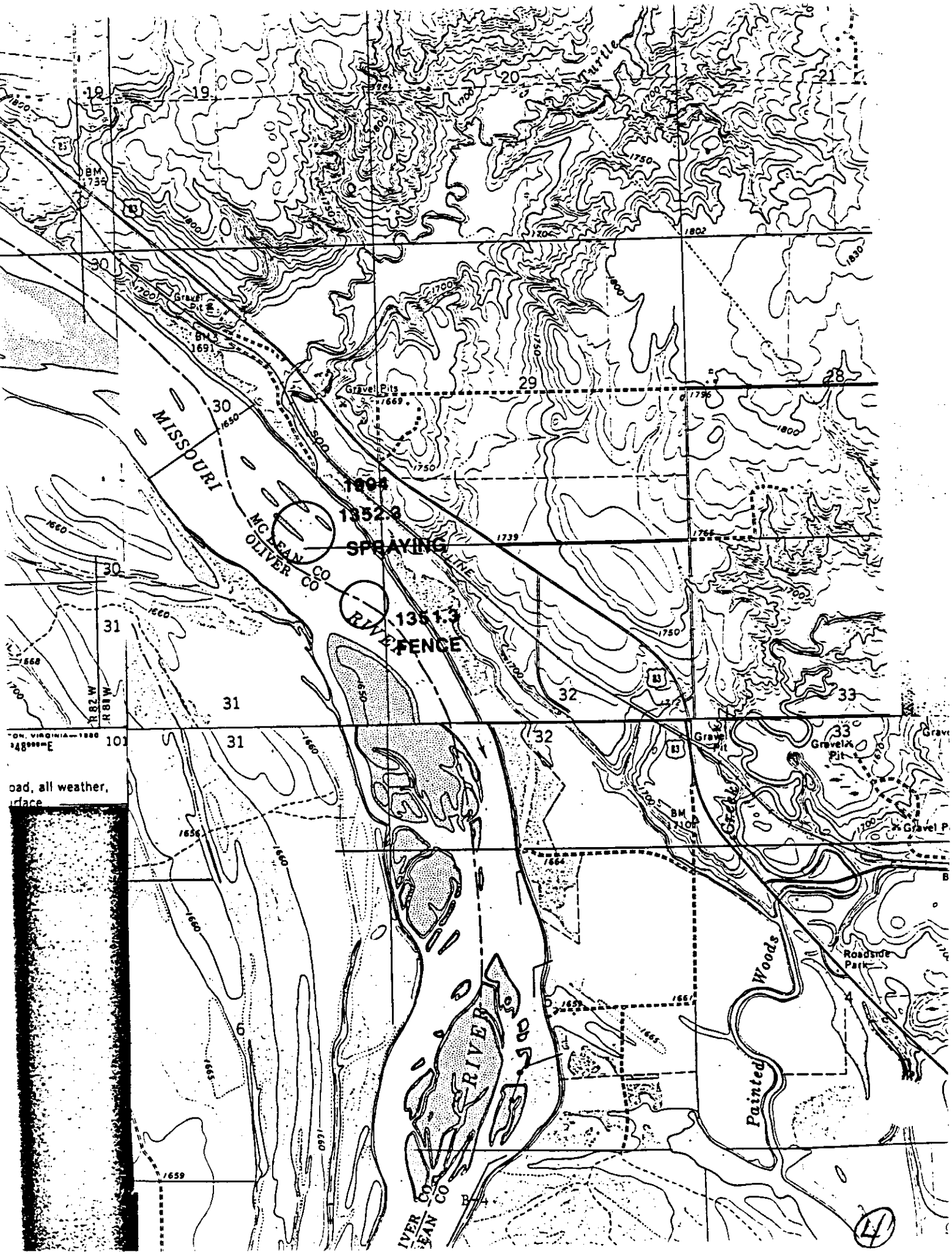
MAPS OF HABITAT AREAS

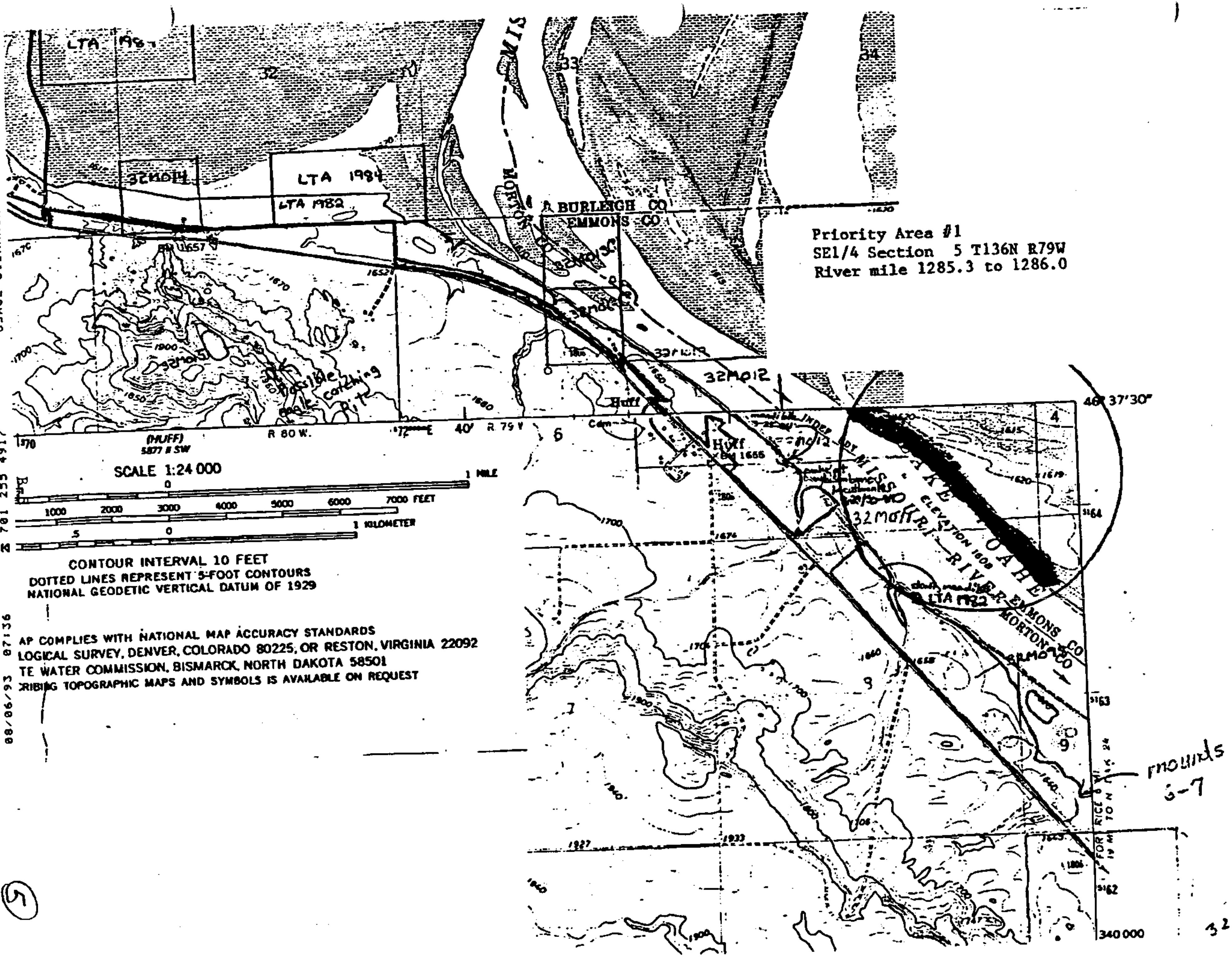

1373.5
SPRAYING
1371.7
SPRAYING
Pumping Sta
Gaging Sta
Substa
Powerplant
Settling Pond
Substa
Powerplant
Water Tank
Settling Ponds
Settling Ponds
BM 1709
BM 1708
BM 1705
BM 1715
BURLINGTON
NORTHERN
FLUME
CANAL
CONVEYOR
Siphon
Siphon
21 Substation
Gravel Pit
Gravel Pit
Gravel Pit
Gravel Pits
Alderin
Alderin Cem
BM 1705
BURLINGTON
Deapolis Cem
MISSOURI
FORT HISTOR.
16
15
14
17
20
21
22
23
26
27
28
29


1368.0
FENCE
MERCER CO
OLIVER CO
MC LEAN CO
OLIVER CO
MC LEAN CO
OLIVER CO
MISSOURI R.
MC LEAN CO
OLIVER CO
Gaging Station
BM 1942
19
20
21
22
29
30
31
32
33
34
36.


MISSOURI
1994
1355.5
SPRAYING
LEWIS AND CLARK
GAME MANAGEMENT
AREA
BM 1671
BM 1670
BM 1706
Hensler Cem
Gravel Pit
BM 1668
BURLINGTON
NORTHERN
Hensler
BM 1708
FORT CLARK
SCALE 1:24 000
SANGER 8.6 MI.
1 850 000 FEET (NORTH)
ogical Survey

(3)


1804
1352.3
SPRAYING
1351.3
FENCE
MISSOURI
RIVER
MC LEAN CO
OLIVER CO
Gravel Pits
Gravel Pit
Roadside Park
Painted Woods
Turtle Creek
BM 1691
BM 1710
BM 1739
R82W
R81W
oad, all weather,
dface
4



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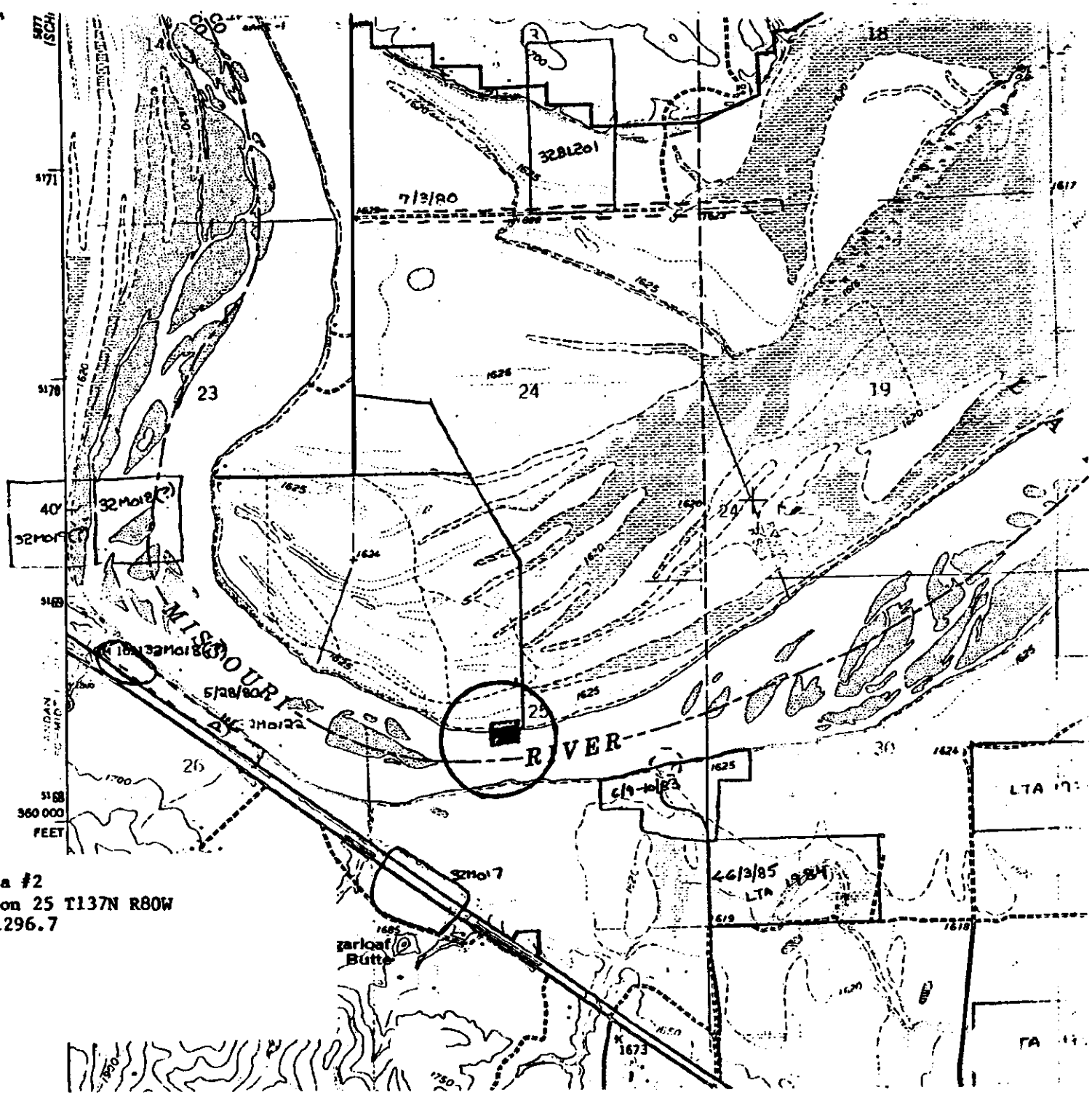
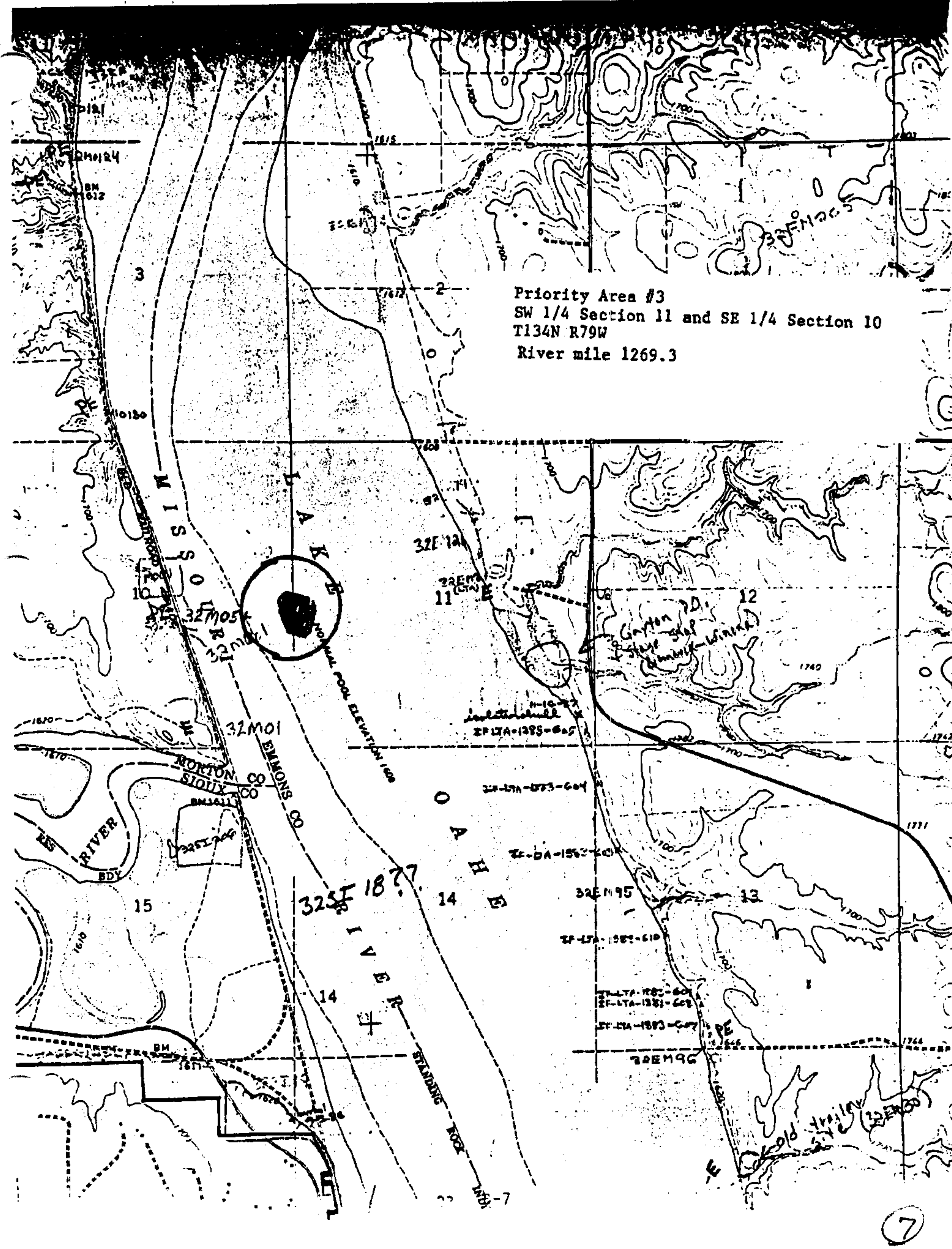
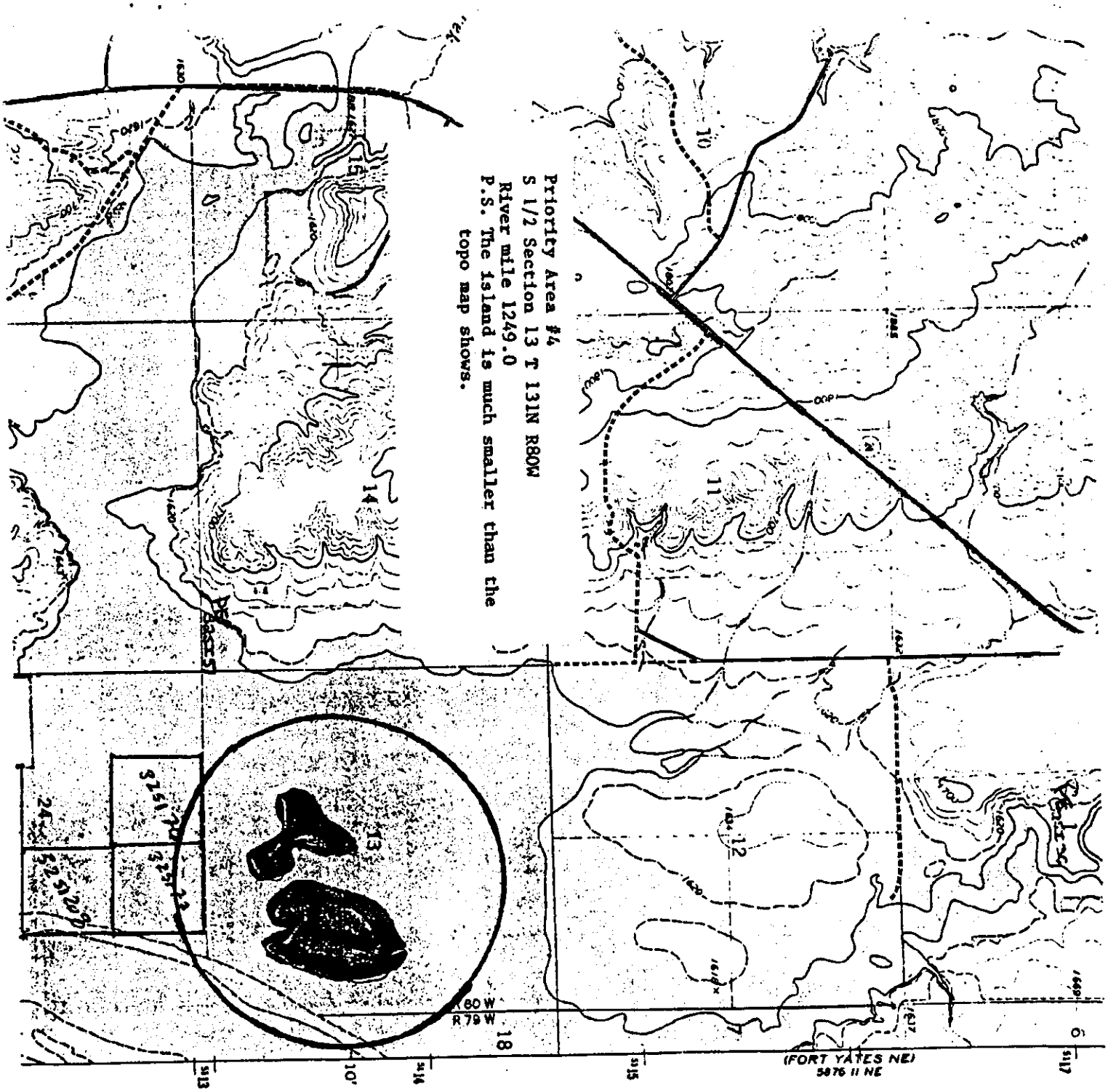
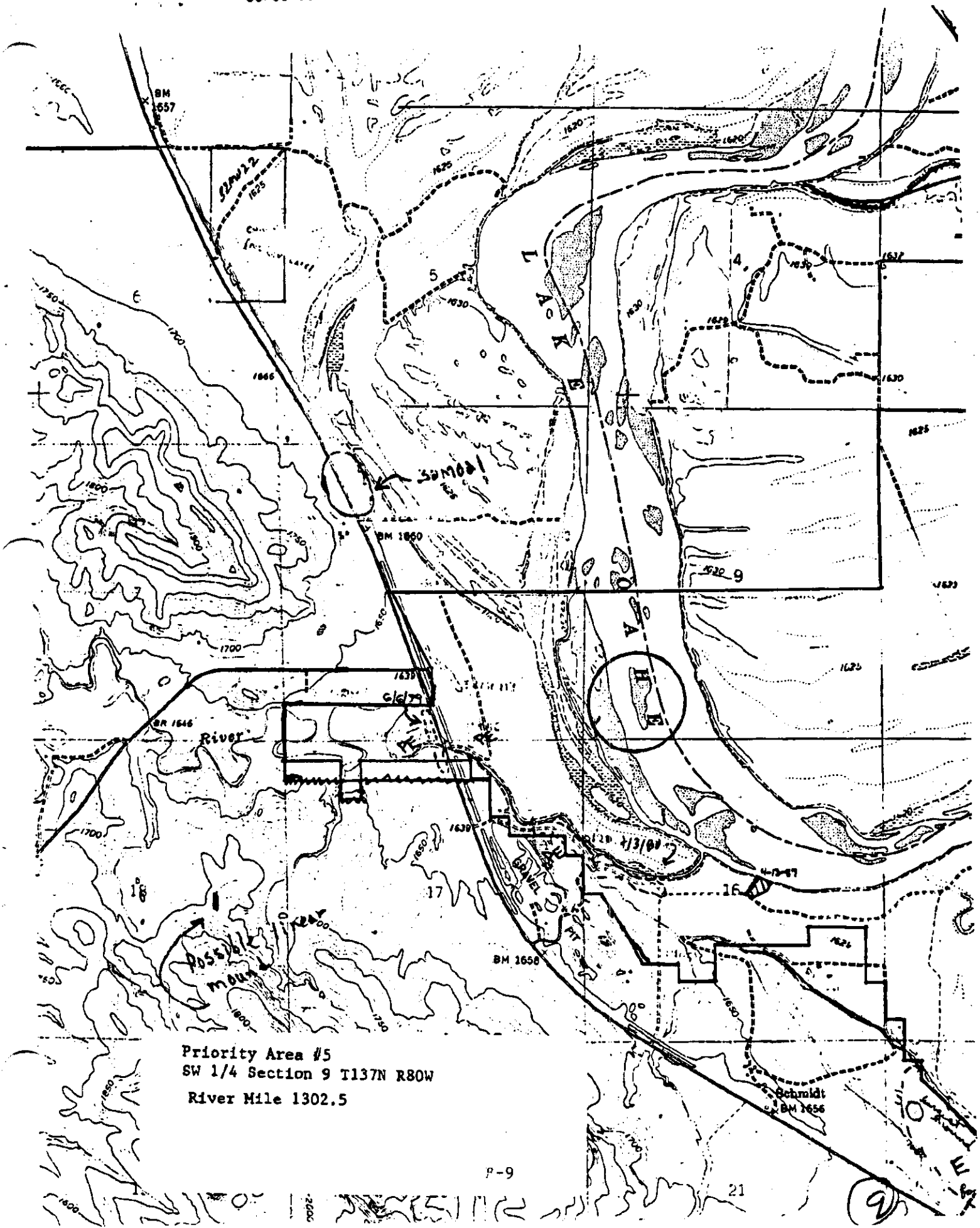


Priority Area #2
NW 1/4 Section 25 T137N R80W
River mile 1296.7

(6)


Priority Area #3
SW 1/4 Section 11 and SE 1/4 Section 10
T134N R79W
River mile 1269.3
MISSOURI RIVER
LAKE OAHE
NORMAL POOL ELEVATION 1608
NORTON CO
SIOUX CO
EMMONS CO
RES RIVER BDY
STANDING ROCK
32M01
32M05
32E 1877
32EM95
32EM96
3
2
10
11
12
13
14
15


Priority Area #4
S 1/2 Section 13 T 131N R80W
River mile 1249.0
P.S. The island is much smaller than the topo map shows.
(FORT YATES NE)
5876 II NE

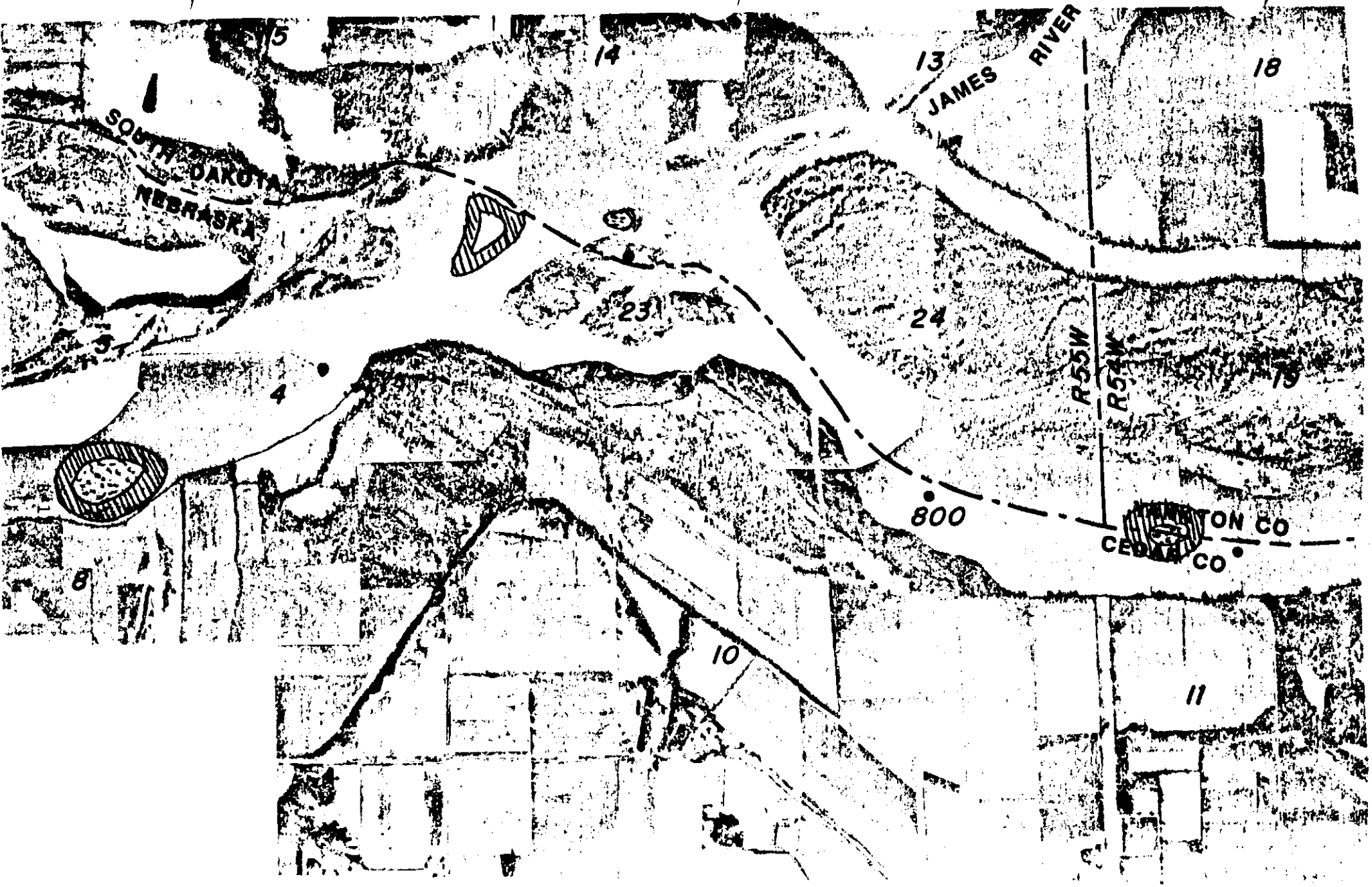

BM 1657
LAKE
BM 1660
River
BM 1646
BM 1656
Schmidt
BM 1656
Possible mound
Priority Area #5
SW 1/4 Section 9 T137N R80W
River Mile 1302.5

RM. 875.0
T 95N
T 94N
B-10

875
PUSH
OF
SAND
T.95N.
T.94N.
ISLAND
SOUTH DAKOTA

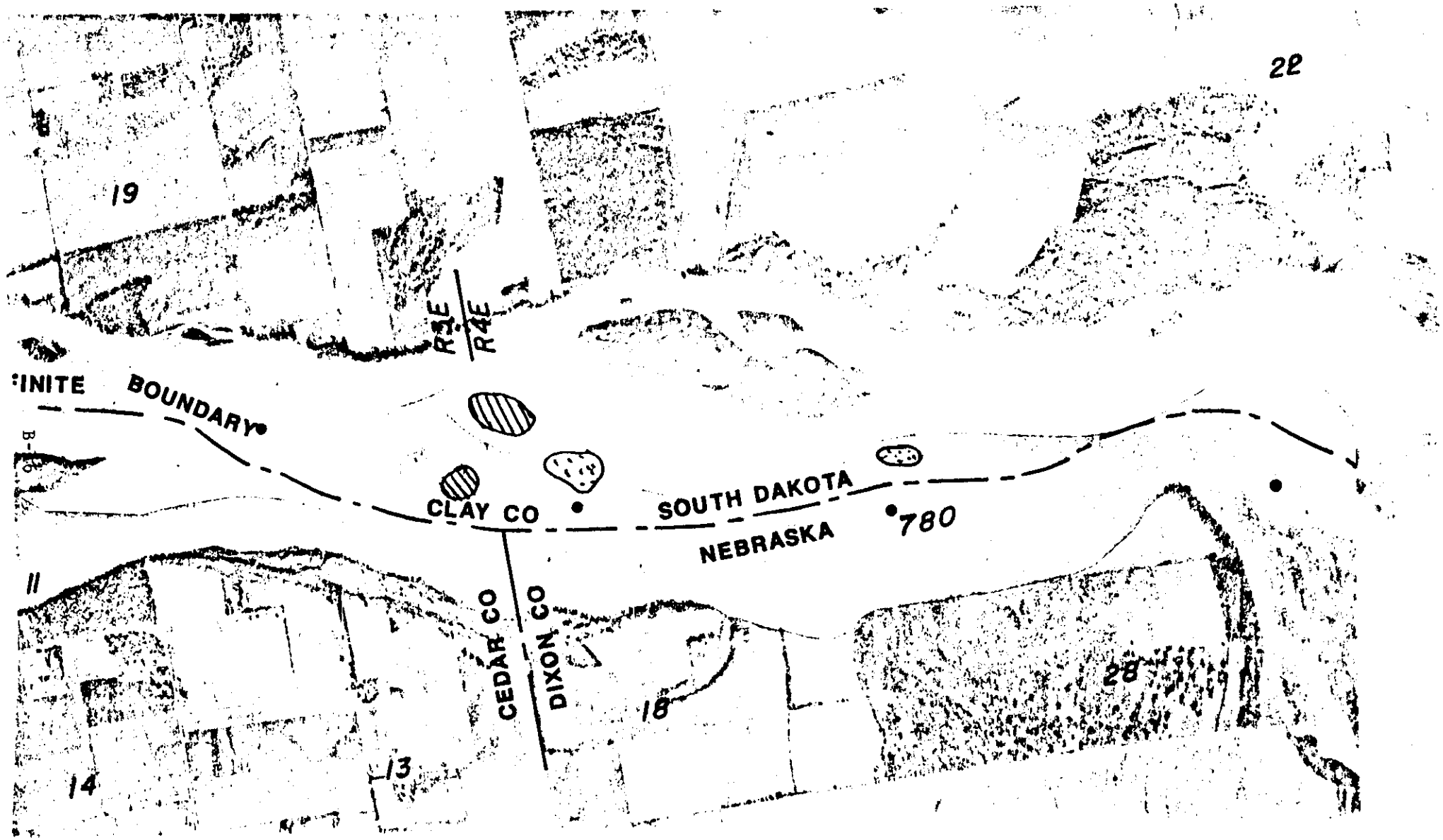
MISSOURI RIVER

GAVINS POINT DAM TO PONCA
UNCONTROLLED AERIAL MOSAIC
18 OCT 1990


15
14
13
JAMES RIVER
18
SOUTH DAKOTA
NEBRASKA
23
24
3
4
R55W
R54W
19
800
TON CO
CO
8
10
11

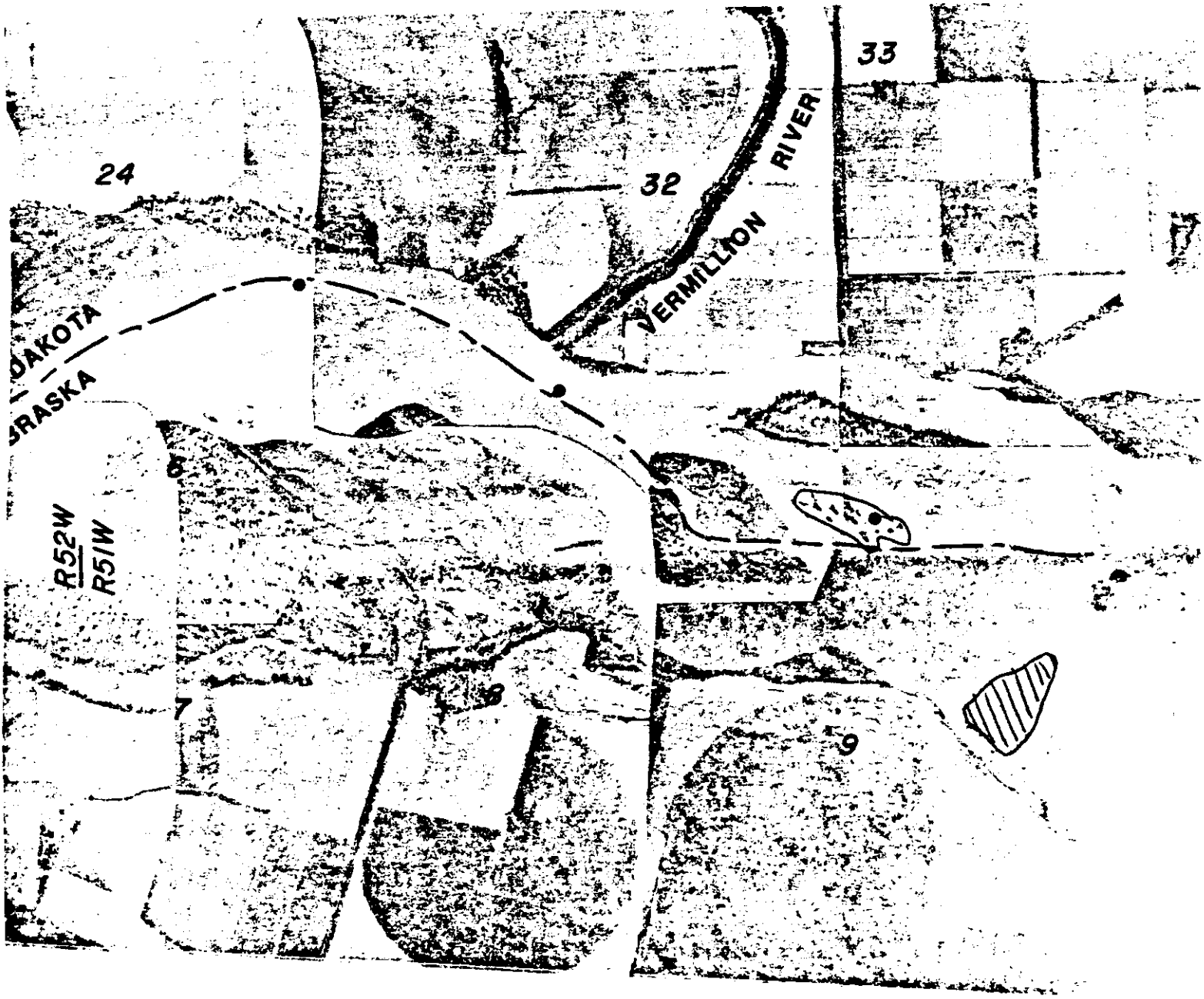
YANKTON CO
CEDAR CO
795
B-14
32
28
34
9
2
7

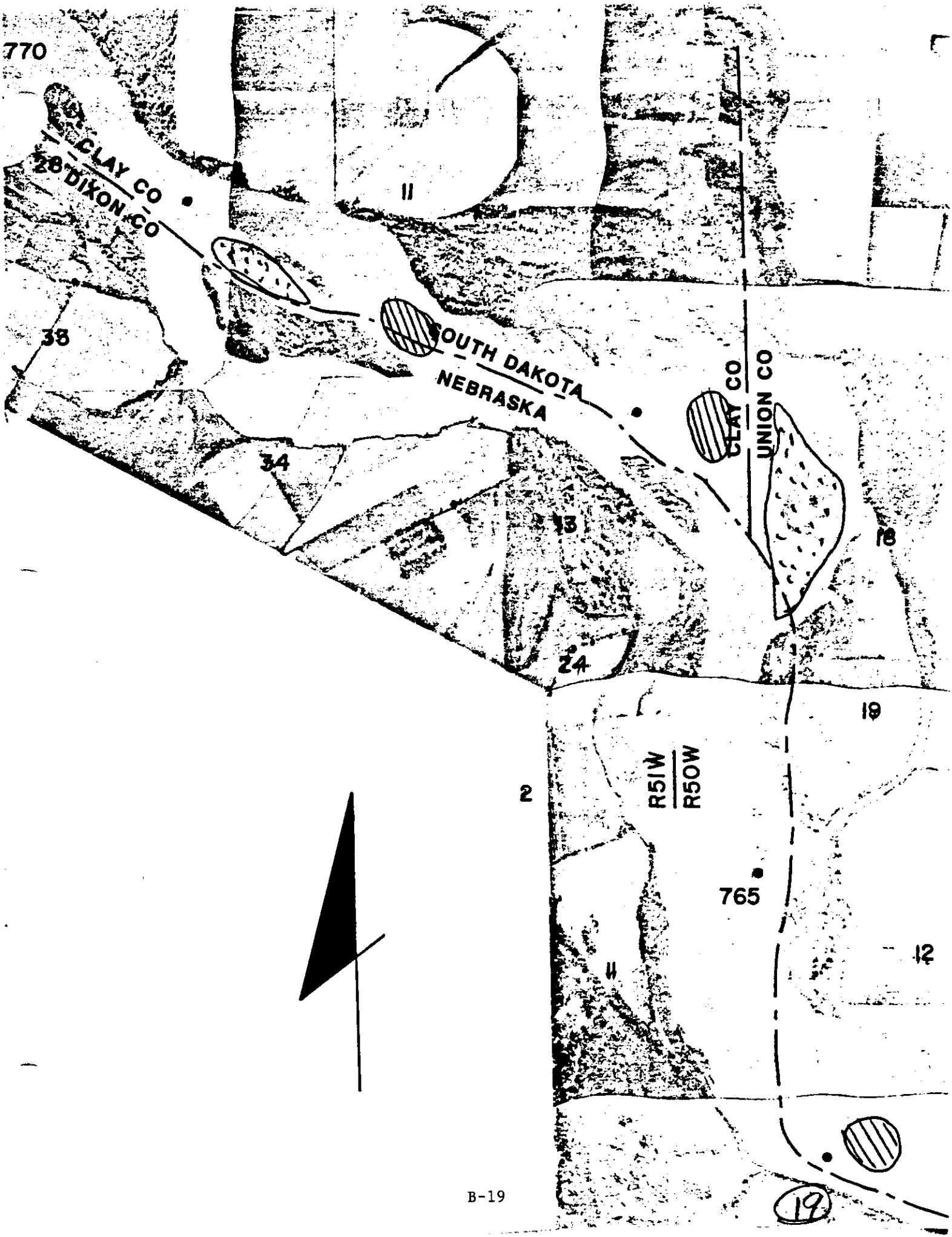
R54W
R53W
90
CLAY CO
CEDAR CO
18
17
16
T33N
T32N
20
21
SOUTH D
NEB

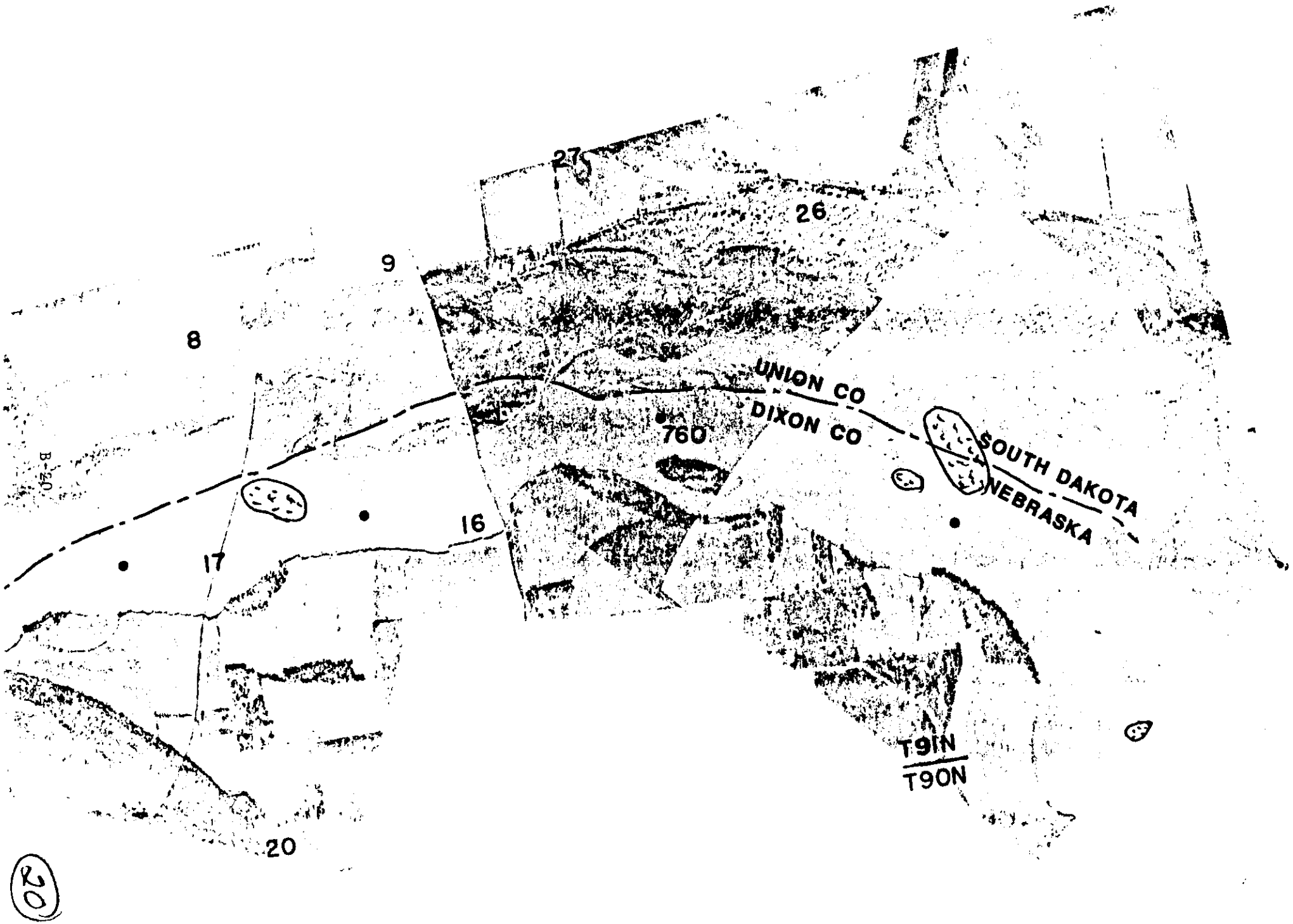

22
19
R3E
R4E
INITE BOUNDARY
B-16
CLAY CO
SOUTH DAKOTA
NEBRASKA
780
11
CEDAR CO
DIXON CO
18
28
14
13

(9)


26
27
CLAY CO
DIXON CO
T92N
T91N
3
22
23
21
28
29
775
12


33
24
32
VERMILLION RIVER
DAKOTA
BRASKA
R52W
R51W
6
7
8
9


770
CLAY CO
DIXON CO
28
11
38
SOUTH DAKOTA
NEBRASKA
34
CLAY CO
UNION CO
13
18
24
19
2
R51W
R50W
765
11
12
19


27
26
9
8
UNION CO
DIXON CO
760
SOUTH DAKOTA
NEBRASKA
16
17
T91N
T90N
20
B-20

APPENDIX C

404 PERMIT APPLICATION

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

(33 CFR 325)

OMB APPROVAL NO. 0702-0036
Expires 30 June 1989

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application *(see sample drawings and instructions)* and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER *(To be assigned by Corps)*

2. NAME AND ADDRESS OF APPLICANT

LAKE FRANCIS CASE OFFICE
U.S. ARMY, CORPS of ENGINEERS, OMAHA DIST.
P.O. BOX 109
PICKSTOWN, S.D. 57367

Telephone no. during business hours

A/C ( ) _____ *(Residence)*
A/C (605) 487-7847 *(Office)*

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

MERRITT STEGMEIER
LAKE MANAGER

Telephone no. during business hours

A/C ( ) _____ *(Residence)*
A/C (605) 487-7847 *(Office)*

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT	DATE

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

ACTIVITY CONSISTS OF PLACING SPALLS IN MISSOURI RIVER BED, NOT TO EXCEED 100 TON (60 C.Y.), TO FIRM UP "ROAD BED" FOR ACCESS TO SANDBAR. WORK WILL THEN TAKE PLACE ON THE SANDBAR CONSISTING OF BORROWING SAND FROM THE SANDBAR AND PUSHING IT UP INTO RAISED AREAS (RIDGES & PLATFORMS) ON THE SANDBAR ITSELF. ADDITIONALLY TREE TRUNKS AND SEABAGS MAY BE USED ON THE PERIMETER OF THE AREAS TO STABILIZE THE RAISED AREAS FROM RIVER EROSION. ALL WORK WILL BE IN THE VICINITY OF R.M. 875.0, MISSOURI RIVER, SECT 35, T95N R65W, CHARLES MIX CO., SD.

4b. PURPOSE

THIS WORK WILL CREATE NESTING HABITAT FOR THE LEAST TERN AND THE PIPING PLOVER, TWO RARE AND ENDANGERED SPECIES.

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

ON SITE, IMMEDIATELY ADJACENT TO BORROW AREA ON SANDBAR AT RM 875.0. TOTAL YARDAGE WILL DEPEND ON ISLAND TOPOGRAPHY AND AMOUNT OF POTENTIAL FOR HABITAT DEVELOPMENT

5. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ALSO ADJOINS THE WATERWAY

YANKTON SIOUX TRIBE, RR3, WAGNER, S.D. 57383

STATE OF SOUTH DAKOTA

6. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED

MISSOURI RIVER. RIVER MILE 875.0

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED SECT. 35, T95N., R65W, CHARLES MIX COUNTY SOUTH DAKOTA.

ADDRESS: RIVER MILE 875.0

STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

COUNTY STATE ZIP CODE

STATE OF SOUTH DAKOTA (MISSOURI RIVER ISLAND)

LOCAL GOVERNING BODY WITH JURISDICTION OVER SITE

8. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☒ NO
If answer is "Yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

ISSUING AGENCY	TYPE APPROVAL	IDENTIFICATION NO.	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL

NONE.

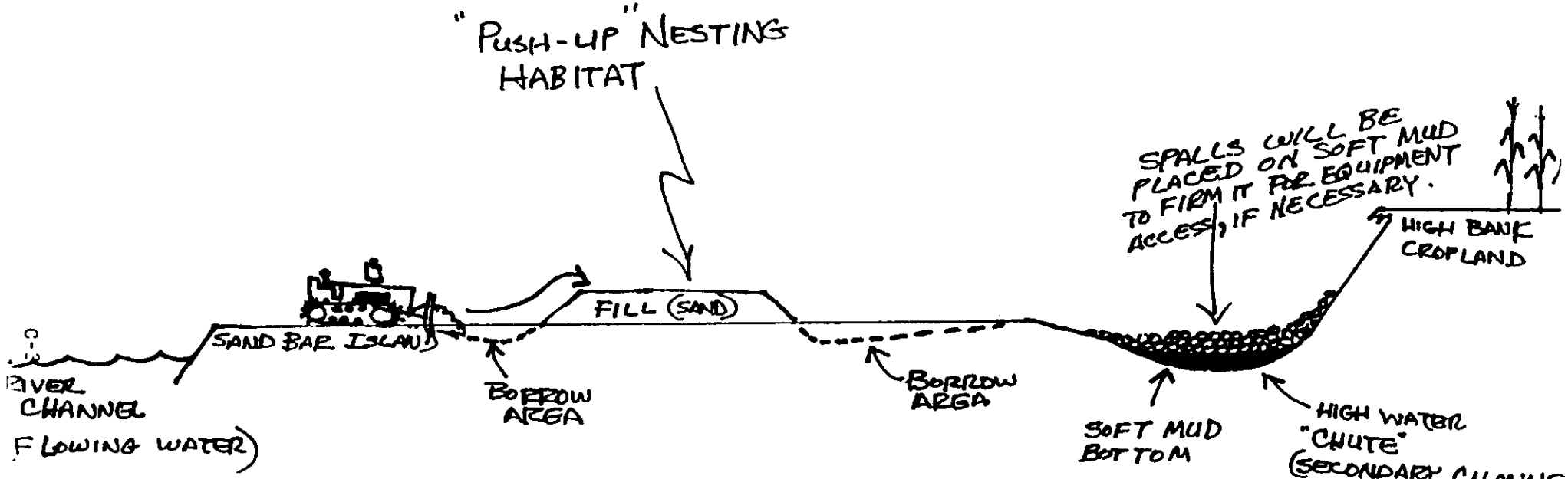
10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT _____ DATE _____ SIGNATURE OF AGENT _____ DATE _____

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The Unite knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitiou fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.


"PUSH-UP" NESTING HABITAT
SPOILS WILL BE PLACED ON SOFT MUD TO FIRM IT FOR EQUIPMENT ACCESS, IF NECESSARY.
HIGH BANK CROPLAND
FILL (SAND)
SAND BAR ISLAND
RIVER CHANNEL (FLOWING WATER)
BORROW AREA
BORROW AREA
SOFT MUD BOTTOM
HIGH WATER "CHUTE" (SECONDARY CHANNEL)

(NOT TO SCALE)

APPENDIX D

EA MAILING LIST

INTERESTED AGENCIES:

Mr. John Sidle
U.S. Fish and Wildlife Service
203 West Second Street
Federal Building
Grand Island, Nebraska 68801

Ms. Nell McPhillips
U.S. Fish and Wildlife Service
420 South Garfield Avenue,
Suite 400
Pierre, South Dakota 57501

Mr. Dan Licht
U.S. Fish and Wildlife Service
1500 Capitol Avenue
Bismarck, North Dakota 58501

Mr. Greg Wingfield
Nebraska Game and Parks
Commission
P.O. Box 30370
Lincoln, Nebraska 68503

Ms. Eileen Dowd Stukel
South Dakota Game, Fish,
and Parks
523 East Capitol
Pierre, South Dakota 57501

Mr. Randy Kreil
North Dakota Game and Fish
100 N. Bismarck Expressway
Bismarck, North Dakota 58501

Ms. Rochelle Renken
Missouri Department of
Conservation
P.O. Box 180
Jefferson City, Missouri 65102

Mr. Dennis Christopherson
U.S. Fish and Wildlife Service
1501 14th Street, Suite 230
Billings, Montana 59812

Mr. Arnold Dood
Montana Department of Fish,
Wildlife, and Parks
1400 S. 19th Street
Bozeman, Montana 59715

Mr. Warren Hill
National Park Service
Niobrara/Missouri National Scenic
Riverways
P.O. Box 591
O'Niell, Nebraska 68763

Mr. Don Castleberry,
Regional Director
National Park Service
Midwest Region
1709 Jackson
Omaha, Nebraska 68102-2571

Mr. Jim Scherer, Regional
Administrator
Environmental Protection Agency
Region 8
999 18th Street, Suite 500
Denver, Colorado 80202-2405

U.S. Environmental Protection
Agency
Region 7
726 Minnesota Avenue
Kansas City, Kansas 66101

APPENDIX E

CULTURAL RESOURCES BRIEFING

ORIENTATION FOR CONTRACTORS ON NESTING HABITAT IMPROVEMENT ON THE MISSOURI RIVER

It is possible that construction activities on these islands might uncover some important parts of our national past. This pamphlet tells you about some things to look for. **IF YOU FIND SOMETHING THAT LOOKS IMPORTANT, REPORT IT TO CASEY KRUSE.** If you don't know if it is important, report it to Casey Kruse. He will then report it to an archeologist in the Omaha District.

There are two sets of things that we want you to look for during your work, artifacts and features. Artifacts are manmade objects that are portable, features are not portable.

Not everything is equally important. One or two bricks are not important (they could be left over from a recent barbecue), but one piece of human bone is.

Artifacts

Bones. If you find any bones, you need to take a look at them. First of all, are they human? If they are human, stop work at this portion of the site RIGHT AWAY and report them to the Corps. Work on some other part of the island until we get this worked out. Do the bones look like they have manmade marks, like grooves or holes in them? They might be bone tools.

Chipped Stone. Many tools used by the Indians were made from stone that they chipped into a sharp edge. Look for things like arrowheads or spear points, and also just small chips of stone.

Pottery. The white settlers and Indians made pottery. Indian pottery is gray or brown in color, and you might only see small pieces. The pottery made by the settlers looks like the plates and china we use today.

Glass. Glass that you might find will be flat window glass or curved glass used for bottles. Both come in many different colors, such as blue, red, purple, or others.

Bricks, concrete and other building material. It is possible that some building material like this might be found. Look at the brick for impressed names or initials.

Metal. You might find iron or brass artifacts like old anchors or parts of steamship boilers.

Features

Boats. A number of steamboats that traveled along the Missouri River have been wrecked. Sometimes these wrecks were covered over by silt and have been preserved.

One of the most famous is the wreck of the "Bertrand," which was found about three miles from the Missouri River, in what is now Desoto Bend. They found the intact hull and most of the cargo. It is possible that you might find portions of a wreck buried in one of the islands. Look for any buried pieces of wood that are milled, that is planks or beams. It is possible that you might find portions of the cargo, like bottles

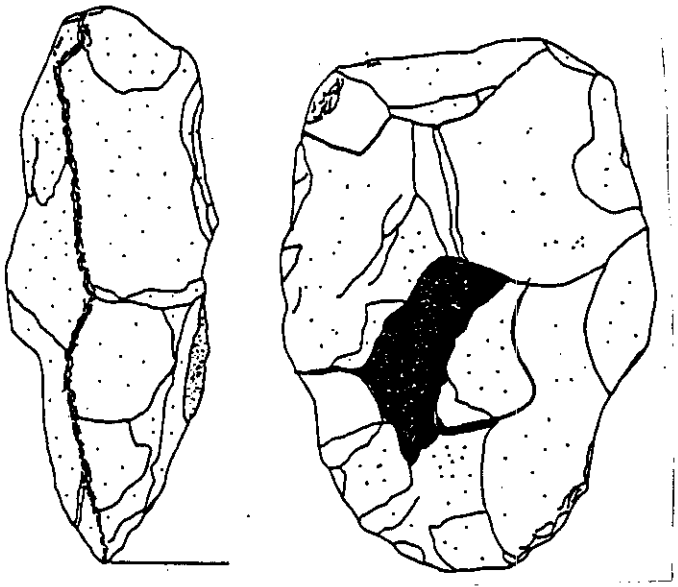
Buildings. It is possible that you might uncover building foundations during your work. These foundations might be made of wood, stone, or concrete.

Firepits. It is possible that the remains of ancient or recent fire might remain. Look for any areas that appear darkened with charcoal or reddened.

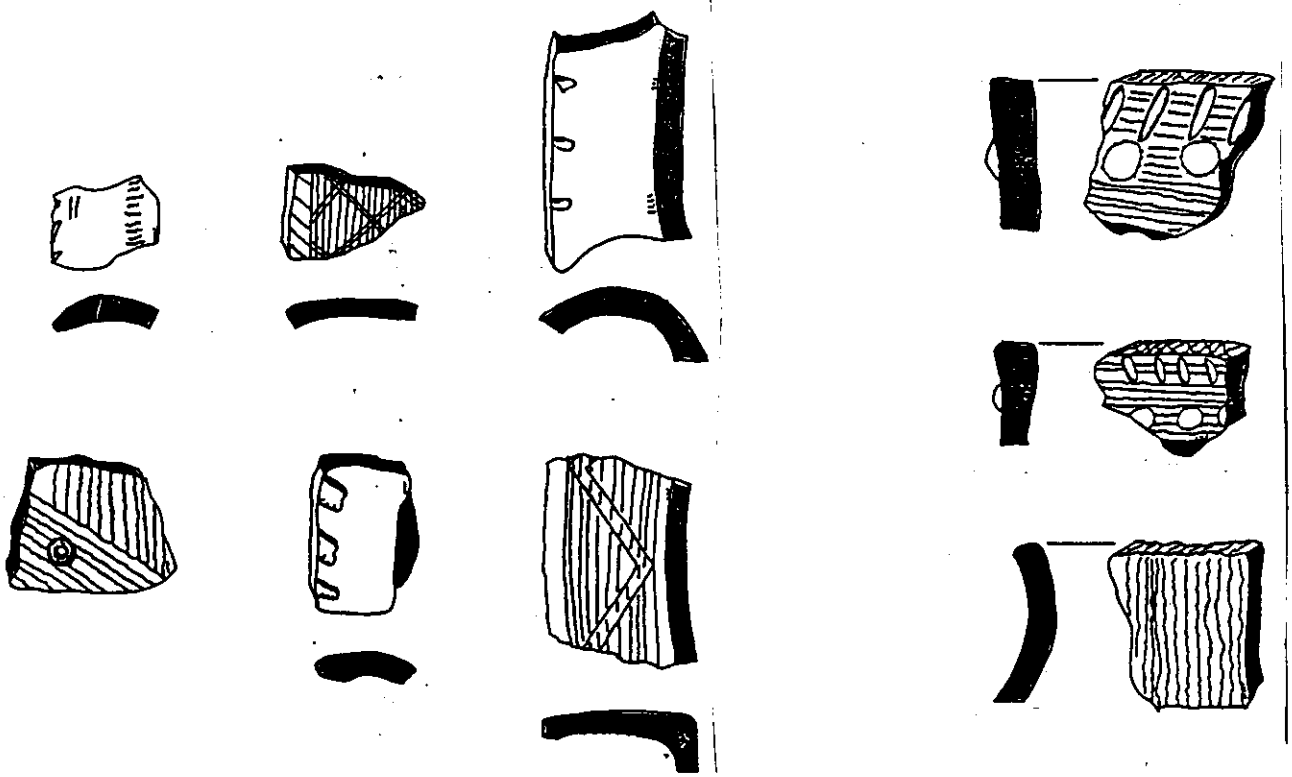
Things you need to report. Any human bone should be reported right away; **remember these are important discoveries.** Any artifacts must be reported to Casey Kruse.

Things you don't need to report. Any recent garbage, that dates to the last ten years, does not need to be reported. Any beer or pop cans, plastic food wrappers, paper cups are too recent for us to worry about. Older artifacts do need to be reported but very recent ones do not.

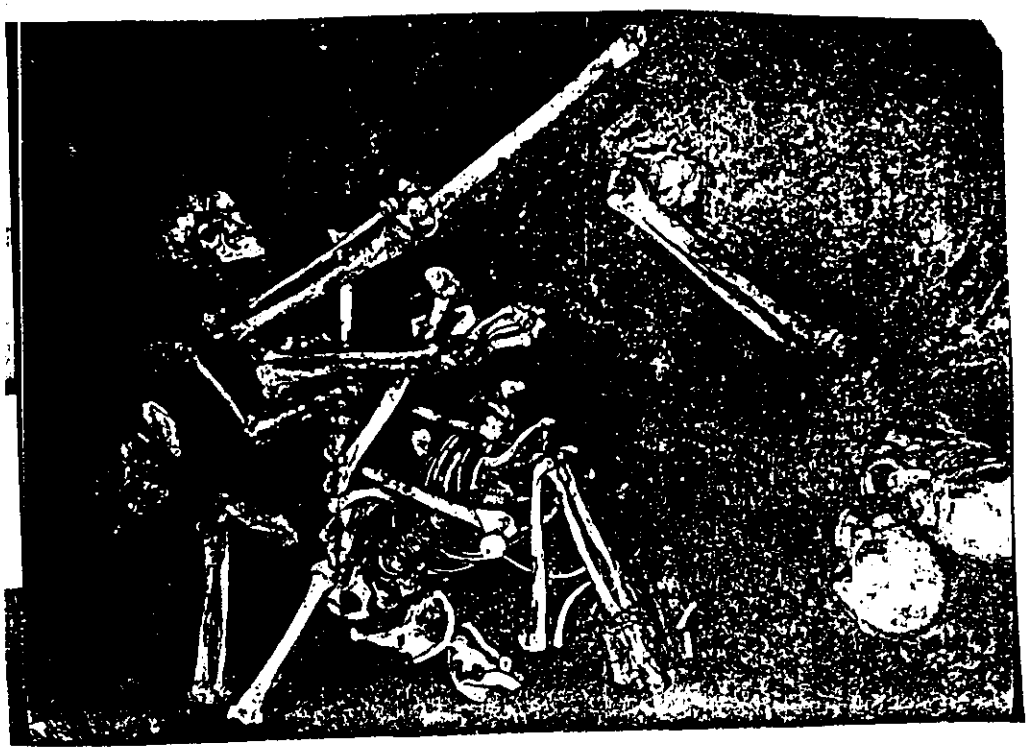
OMAHA DISTRICT ARCHEOLOGIST
ED BRODNICKI WORK (402)221-4888
HOME (402)554-1557



STONE TOOL

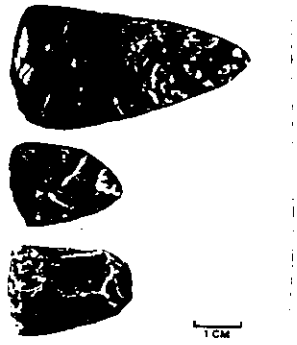


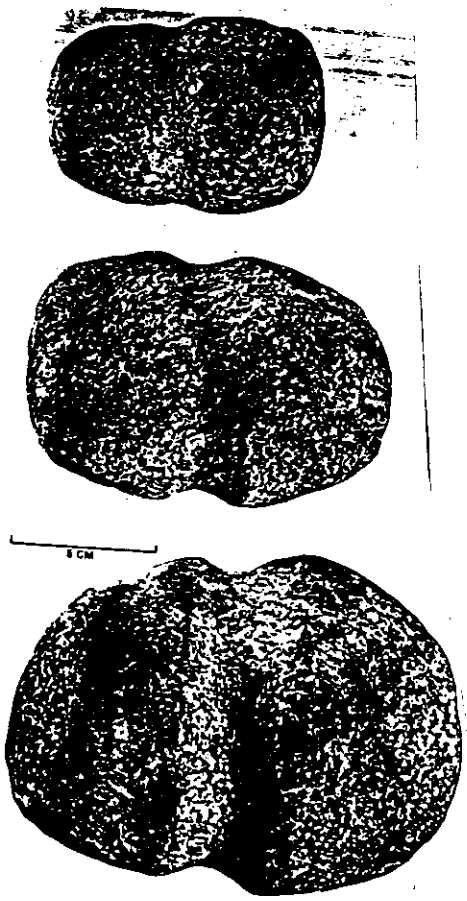
INDIAN POTTERY



BURIAL

FIGURE 47





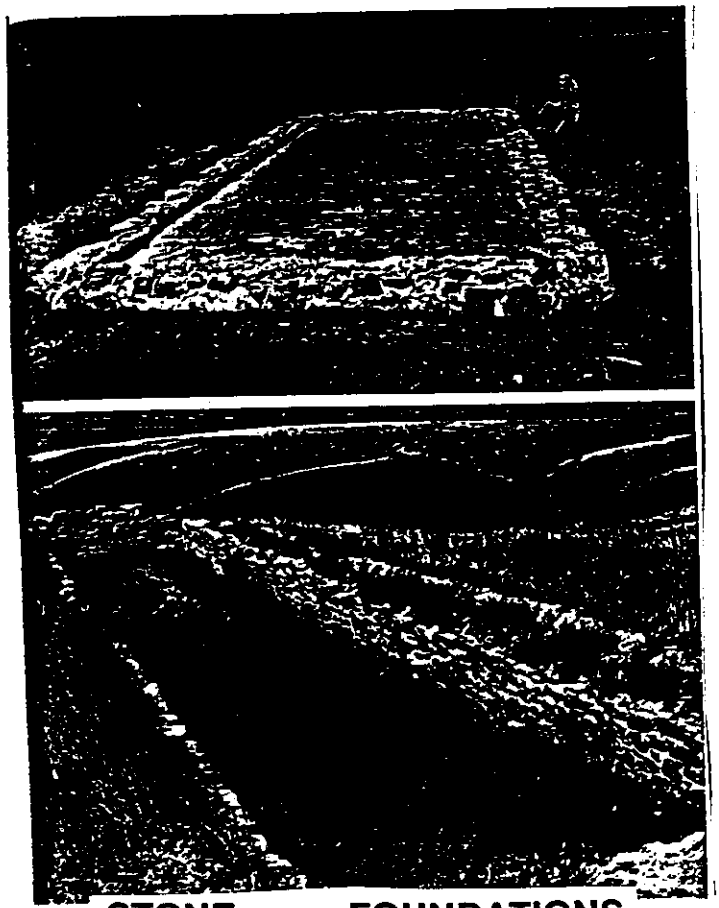
STONE TOOLS

FIGURE 27 Foundation and porch of commanding officer's quarters at Fort Sisseton.

FIGURE 28 Brick liner of commissary storehouse at Fort Sisseton.

WOODEN AND BRICK FOUNDATIONS

STEAMBOAT WRECK



STONE FOUNDATIONS

APPENDIX F

WRITTEN COMMENTS AND RESPONSES

United States Department of the Interior

NATIONAL PARK SERVICE
MIDWEST REGION
1709 JACKSON STREET
OMAHA, NEBRASKA 68102-2571

IN REPLY REFER TO:

L7619(MWR-PQ)
RN 0890

SEP 13 1993

Mr. Richard D. Gorton, Chief
Environmental Analysis Branch
Planning Division
Corps of Engineers, Omaha District
215 North 17th Street
Omaha, Nebraska 68102-4978

Dear Mr. Gorton:

This is to provide early coordination review of proposed fall activities to improve nesting habitat conditions for the interior least tern and the piping plover in the Missouri National Recreational River from Gavins Point Dam to Ponca State Park. We have the following comments.

E-1

General comments

1. We recommend the environmental assessment (EA) be organized like the final EA you completed for spring 1993 tern and plover habitat enhancement, including a section on impacts on the National Wild and Scenic Rivers System.

2. We are advised by local residents that site #875 is in the immediate vicinity of a steamboat wreck. Also, the immediate shore area of a portion of the Missouri River in this stretch is part of historic Rising Hail community. Therefore, we recommend you document all informal as well as any formal consultation and review with the South Dakota State Historic Preservation Officer and his staff in Vermillion, South Dakota.

3. We question the appropriateness of any use of imported gravel, which would be an unnatural intrusion into the river. We would also prefer no fencing be utilized. Please continue informal discussion on such specific matters with Mr. Warren Hill, Superintendent of the Niobrara/Missouri National Scenic Riverways as project implementation takes place (402-336-3970).

Recreation Assistance Programs comments

The proposed work may impact the following projects which were developed and/or acquired with assistance from the Land and Water Conservation Fund (LWCF):

TAKE PRIDE IN AMERICA

CORPS' RESPONSES TO COMMENTS

1. 1. We concur.

2. 2. Both the SHPO from South Dakota and from Nebraska were informed of the planned activities. Responses (South Dakota) have been included in the final EA.

3. 3. The gravel is from a local source and is necessary to prevent the heavy equipment from becoming mired in an area of soft sediment. No fencing is planned for areas of the Missouri National Recreational River, or the Missouri River National Recreational River.

In Cedar County, Nebraska

Project 31-00238, St. Helena River Park Acquisition
Sponsor: Cedar County
Acquisition of 8 acres located in T33N, R1E, Section 11.
Facilities: picnic areas, sports and play fields, and boating facilities.

In Dixon County, Nebraska

Project 31-00004, Ponca State Park Acquisition
Acquisition of 352 acres.

Project 31-00038, Ponca State Park Development

Project 31-00072, Ponca State Park Camp Area and Group Camp Development

Project 31-00513, Ponca State Park Acquisition
Acquisition of 56 acres.

The above-listed projects in Dixon County are sponsored by the Nebraska Game and Parks Commission, and facilities include campgrounds, picnic areas, sports and play fields, swimming facilities, boating facilities, a natural area, and support facilities. Although bulldozing activities are not indicated on the maps for the Ponca State Park area, it is stated in the documentation under review that habitat work will be done from Gavins Point Dam to Ponca State Park.

You should consult with the official who administers the LWCF in the State of Nebraska (Mr. Rex Amack, Director, Nebraska Game and Parks Commission, 2200 North 33 Street, P.O. Box 30370, Lincoln, Nebraska 68503-3070) to determine potential conflicts with section 6(f)(3) of the LWCF Act (Public Law 88-587, as amended). It is stated in section 6(f)(3):

> "No property acquired or developed with assistance under this section shall, without the approval of the Secretary (of the Interior), be converted to other than public outdoor recreation uses."

These comments are provided as informal technical assistance and are not intended to reflect our probable response to any document which may be prepared in this matter to comply with the National Environmental Policy Act or any other applicable environmental protection mandate.

Sincerely,

William W. Schenk
Acting Regional Director

F-2

4. 4. This does not apply to the habitat creation project, as all work will be done on islands in the river, not in recreational areas along the shoreline. Construction will not interfere with LWCF lands, however, tern and plover use of resulting islands may impact use of these islands for recreational purposes during the nesting season.

cc:
Mr. Rex Amack, Director
Nebraska Game and Parks Commission
2200 North 33 Street
P.O. Box 30370
Lincoln, Nebraska 68503-3070

Mr. Warren Hill
Superintendent
Niobrara/Missouri National Scenic Riverways
P.O. Box 591
O'Neill, Nebraska 68763-0591

United States Department of the Interior

TAKE PRIDE IN AMERICA

FISH AND WILDLIFE SERVICE
Fish and Wildlife Enhancement
420 S. Garfield Avenue, Suite 400
Pierre, South Dakota 57501-5408

October 19, 1993

Mr. Richard D. Gorton
Chief, Environmental Analysis Branch
Planning Division
Corps of Engineers, Omaha District
215 North 17th Street
Omaha, Nebraska 68102-4978

Re: Draft Environmental Assessment
for Fall 1993 Tern and Plover
Habitat Enhancement Activities

Dear Dick:

This is in response to your September 24, 1993, request for comments on the draft Environmental Assessment of the effects of Fall 1993 habitat enhancement activities on the Missouri River for the interior least tern and the piping plover. This office has coordinated U.S. Fish and Wildlife Service comments for our offices in Montana, North Dakota, South Dakota, and Nebraska.

General

The Corps of Engineers (Corps) is well aware of the flow windows established in the biological opinion for operations of the Missouri River Main Stem System (see page 55 of the biological opinion, item 1.c.). We recommend that any habitat created/enhanced by the Corps be high enough in elevation that it will be available to the birds at the high end of the flow windows. Maintenance of these habitats over the long term will ensure that they are available for the birds over the long term. 1.

We are aware the Corps has developed the "red book" to address tern and plover management for Fiscal Year 1993 - Fiscal Year 1995. We further understand that the proposed habitat management actions evaluated by this draft environmental assessment are a result of the "red book." Unfortunately, the Missouri River system has changed much since the "red book" was developed. The "red book" assumed that the system would take several years to recover from the previous years of drought. It is imperative that, if the system will be in the flow windows for the 1994 nesting season, the creation of habitat will need to be aggressively pursued throughout the system and not just limited to what exists in the "red book." The proposed work in this draft Environmental Assessment appears to follow the plan of the "red book" only, which is not responsive to present conditions. 2.

CORPS' RESPONSES TO COMMENTS

1. We concur.

2. The "red book" has been finalized and circulated to members of the Tern and Plover Subcommittee (Subcommittee) of the Missouri River Natural Resources Management Committee. Any proposed changes in the scope of the "red book" should be addressed at the Subcommittee meetings.

Montana

Montana was not mentioned for habitat work in the fall of 1993. In order to meet tern and plover habitat needs in Montana for the 1994 nesting season, we recommend the following actions in regard to habitat creation and enhancement:

1. Continuation of the use of floating islands on the reach below Fort Peck Dam.

3. Floating island re-installation will take place in the spring.

2. Flow manipulations that mirror a more natural hydrograph are an appropriate habitat enhancement tool in the river reach below Fort Peck Dam, particularly if flows during the nesting season can be limited to 8,000 cfs. We recommend the following flows based on the Corps' October 1, 1993, forecast for normal runoff:

1 May-31 May	12,000 cfs or higher
1 June-15 June	11,000 cfs or higher
June 15-August 15	8,000 cfs or lower

4. Flow manipulations are beyond the scope of the District's responsibility for habitat management and monitoring. These issues should be discussed with the MRD representatives at the Subcommittee meetings.

North Dakota

The effort proposed in North Dakota is insufficient. This minimal habitat enhancement effort needs to be considerably expanded. Our North Dakota Field Office is available to discuss potential sites for additional habitat enhancement and creation work. If work cannot be scheduled for this fall, then it should be scheduled for Spring 1994.

5. Work efforts beyond the scope of the "red book" should be addressed at the Subcommittee meetings.

South Dakota/Nebraska

In discussions with Mr. Casey Kruse of the Corps' Lewis and Clark Lake Office, the Corps anticipates completing work on only six potential sites below Gavin's Point Dam. This amount of habitat is insufficient, particularly since the areas under consideration are all above the James River. A preferred management scenario would create or enhance areas up and down the river below Gavin's Point Dam so that habitat is spread throughout this river reach. Habitat creation/enhancement work, in addition to the proposed six sites, needs to be completed so that habitat is available for the anticipated flows that will be within the flow windows designated by the biological opinion.

6. The acreage to be completed is consistent with targeted habitat work in the "red book." Discussion of management scenarios is beyond the scope of the EA, and should be discussed at the Subcommittee meetings.

If you have any questions concerning these comments, please contact me or Nell McPhillips of my staff at (605) 224-8693.

Sincerely,

Nell McPhillips

for M.S. Zschomler
Field Supervisor
South Dakota Field Office

cc: NDFO; Bismarck, ND
MTSO; Billings, MT
NEFO; Grand Island, NE
COE, Missouri River Division; Omaha, NE
Attention: Dick Taylor and Doug Latka
COE, Operations Division; Omaha, NE
Attention: D.F. Owens, Chief
COE, Lewis and Clark Lake Office; Yankton, SD
Attention: Casey Kruse

SOUTH DAKOTA STATE HISTORICAL SOCIETY
State Historical Preservation Center

October 13, 1993

Richard Gorton
Corps of Engineers
215 N. 127th Street
Omaha, NE 68102-4978

106 Determination of Effect
Project: 931013002F - Piping Plover Habitat
Location: Yankton County
(CORPS)

Dear Mr. Gorton:

In reviewing the above referenced project under Section 106, the Historical Preservation Center has made the following determination concerning the effect of your action on historic or archaeological resources.

Based on your letter received of October 13, 1993, it is the determination of the State Historic Preservation Officer that the project will have **NO EFFECT** provided that the recommendations outlined in your letter are followed.

Should you have any further questions please do not hesitate to contact Allyson Brooks at the Historical Preservation Center. Your concern for the protection of the heritage of our state is appreciated.

Sincerely,

J.R. Fishburne
State Historic Preservation Officer

cc: State Archaeologist, Rapid City

P.O. Box 417
Phone (605) 677-5314

3 East Main Street

Vermillion, SD 57069
FAX: (605) 677-5364